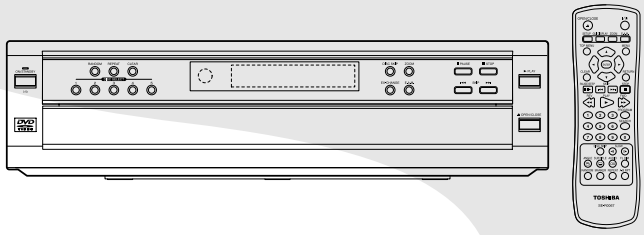
TOSHIBA

FILE NO. 810-200204

SERVICE MANUAL

DVD VIDEO PLAYER

SD-K615
SD-3805
SD-2805



DOCUMENT CREATED IN JAPAN, May, 2002

CONTENTS

SECTION 1 . . . . SUMMARY

SECTION 2 . . . . CABINET & MAIN CHASSIS

SECTION 3 . . . . ELECTRICAL

SECTION 4 . . . . MECHANISM

SECTION 5 . . . . REPLACEMENT PARTS LIST

SECTION 1

SUMMARY

CONTENTS

OWNER'S MANUAL 1-3
PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS 1-31
SERVICING PRECAUTIONS 1-32
- **GENERAL SERVICING PRECAUTIONS**
- **INSULATION CHECKING PRODEDURE**
- **ELECTROSTATICALLY SENSITIVE DEVICES**

Safety Precautions

WARNING
RISK OF ELECTRIC SHOCK DO NOT OPEN

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR ÉVITER LES CHOC ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER

CAUTION:

This Digital Video Disc Player employs a Laser System.

To ensure proper use of this product, please read this owner's manual carefully and retain for future reference, should the unit require maintenance, contact an authorized service location-see service procedure.

Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

CAUTION: The apparatus shall not be exposed to water, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

FCC WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

REGULATORY INFORMATION: FCC Part 15

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a residential installation. This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the product and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notes on copyrights:

It is forbidden by law to copy, broadcast, show, broadcast via cable, play in public, or rent copyright material without permission.

This product features the copy protection function developed by Macrovision. Copy protection signals are recorded on some discs. When recording these discs on a VCR, picture noise will appear during playback.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

SERIAL NUMBER: The serial number is found on the back of this unit. This number is unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase.

Model No. _____

Serial No. _____

IMPORTANT SAFETY INSTRUCTIONS

CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS OWNER'S MANUAL AND THOSE MARKED ON THE UNIT. RETAIN THIS BOOKLET FOR FUTURE REFERENCE.

This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use, and servicing.

This unit does not contain any parts that can be repaired by the user.

DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

1. **Read These Instructions**
   All safety and operating instructions should be read before the product is operated.
2. **Follow All Instructions**
   All operating and use instructions should be followed.
3. **Keep These Instructions**
   The safety and operating instructions should be retained for future reference.
4. **Heed All Warnings**
   All warnings on the product and in the operating instructions should be adhered to.
5. **Power Sources**
   This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply in your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Grounding or Polarization**
   Do not defeat the safety purpose of the polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
7. **Ventilation**
   Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
8. **Heat**
   Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. **Water and Moisture**
   Do not use this apparatus near water. For example: near a bath tub, wash bowl, kitchen sink, Laundry tub, in a wet basement; or near a swimming pool.
10. **Cleaning**
    Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Clean only with dry cloth.
11. **Power-Cord Protection**
    Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
12. **Overloading**
    Do not overload wall outlets, extension cords, or integral convenience receptacles, this can result in a risk of fire or electric shock.
13. **Lightning**
    Unplug this apparatus apparatus during lightning storms or when unused for long periods of time. This will prevent damage to the product due to lightning and power-line surges.
14. **Object and Liquid Entry**
    Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
15. **Attachments**
    Only use attachments/accessories specified by the manufacturer.
16. **Accessories**
    Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

    PORTABLE CART WARNING
17. **Disc Tray**
    Keep your fingers well clear of the disc tray as it is closing. It can cause personal injury.
18. **Burden**
    Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.
19. **Connecting**
    When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.
20. **Sound Volume**
    Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.
21. **Sound Distortion**
    Do not allow the product to output distorted sound for a longtime. It may cause speaker overheating and fire.
22. **Earphone**
    When you use the earphone, keep the volume at a moderate level. If you use the earphone continuously with high volume sound, it may cause hearing damage.
23. **Laser Beam**
    Do not look into the opening of the disc tray or ventilation opening of the product to see the source of the laser beam. It may cause sight damage.
24. **Disc**
    Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.
25. **Damage Requiring Service**
    Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normal, or has been dropped.
26. **Servicing**
    Do not attempt to service this product yourself as opening or removing the cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
27. **Replacement parts**
    When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
28. **Safety Check**
    Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Table of Contents

Introduction
Safety Precautions 2
IMPORTANT SAFETY INSTRUCTIONS 3
Table of Contents 4
Before Use 5-6
Playable Discs 5
Precautions 6
Notes on Discs 6
About Symbols 6
Front Panel and Display 7
Remote Control 8
Rear Panel 9

Preparation
Connections 10-11
Connecting to a TV 10
Connecting to Optional Equipment 11
Before Operation 12-15
General Explanation 12
On-Screen Display 12
Initial Settings 13-15
• Initial Settings General Operation 13
• Language 13
• Picture 13
• Sound 14
• Others 14
• Parental Control 15

Operation
Operation with DVD and Video CD 16-18
Playing a DVD and Video CD 16
• Exchanging discs during playback 16
• Skipping discs 16
• Exchanging the disc and starting playback . . 16
General Features 17
• Moving to another TITLE 17
• Moving to another CHAPTER/TRACK 17
• Slow Motion 17
• Still Picture and Frame-by-Frame Playback . . 17
• Search 17
• Random 17
• Repeat 18
• Repeat A-B 18
• Time Search 18
• Selecting the sound enhancement 18
• Zoom 18
• Marker Search 19
Special DVD Features 19
• Title Menu 19
• Disc Menu 19
• Camera Angle 19
• Changing the Audio Language 19
• Changing the Audio Channel 19
• Subtitles 19
Operation with Audio CD and MP3 Disc 20
Playing an Audio CD and MP3 Disc 20
• Pause 20
• Moving to another Track 20
• Repeat Track/All/Off 20
• Search 20
• Random 20
• Repeat A-B 20
• 3D Surround 20
• Changing the Audio Channel 20
Programmed Playback 21
Programmed Playback with Audio CD and MP3 Disc 21
Programmed Playback with Video CD 21
• Repeat Programmed Tracks 21
• Erasing a Track from Program List 21
• Erasing the Complete Program List 21
Additional Information 22
Last Condition Memory 22
Screen Saver 22
Video Mode Setting 22
Dimmer Function 22
Notes on MP3 Discs 22

Reference
Troubleshooting 23
Language Code List 24
Area Code List 25
Specifications 26

Others
LIMITED WARRANTY DVD VIDEO PLAYER . . . 27-28

About the symbols for instructions

⚠ Indicates hazards likely to cause harm to the unit itself or other material damage.

Indicates special operating features of this unit.

Indicates tips and hints for making the task easier.

Before Use

Playable Discs

DVD VIDEO	DVD Video (8 cm / 12 cm disc)
COMPACT disc DIGITAL VIDEO	Video CD (VCD) (8 cm / 12 cm disc)
COMPACT disc DIGITAL AUDIO	Audio CD (8 cm / 12 cm disc)

In addition, this unit can play a CD-R or CD-RW that contains audio titles or MP3 files.

Notes
– Depending on the conditions of the recording equipment or the CD-R/RW disc itself, some CD-R/RW discs cannot be played on the unit.
– The unit cannot play the CD-R/RW discs that do not contain any data, or contain different kinds of formatted data other than MP3 and CD-DA data.
– Do not attach any seal or label to either side (the labeled side or the recorded side) of a disc.
– Do not use irregularly shaped CDs (e.g., heart-shaped or octagonal). It may result in malfunctions.

Notes on DVDs and Video CDs
Some playback operations of DVDs and Video CDs may be intentionally fixed by software manufacturers. As this unit plays DVDs and Video CDs according to disc content designed by the software manufacturer, some playback features of the unit may not be available, or other functions may be added.
Refer also to the instructions supplied with the DVDs and Video CDs. Some DVDs made for business purposes may not be playable on this unit.

Regional code of the DVD player and DVDs
This DVD player is designed and manufactured for playback of region “1” encoded DVD software. The region code on the labels of some DVD discs indicates which type of player can play those discs. This unit can play only DVD discs labeled “1” or “ALL”. If you try to play any other discs, the message “Check Regional Code” will appear on the TV screen. Some DVD discs may not have a region code label even though their playback is prohibited by area limits.

Note on DTS-encoded CDs
To avoid possible damage to the audio system, turn down the volume before playing back such discs. Adjust the volume gradually to personal preference. To enjoy DTS Digital Surround™ playback, an external 5.1 channel DTS Digital Surround™ decoder system must be connected to the digital output of the player.

Disc-related terms

Title (DVD only)
The main film content or accompanying feature content or additional feature content, or music album.
Each title is assigned a title reference number enabling you to locate it easily.

Chapter (DVD only)
Sections of a picture or a musical piece that are smaller than titles.
A title is composed of one or several chapters. Each chapter is assigned a chapter number, enabling you to locate the chapter you want. Chapter numbers may not be recorded on all discs.

Track (Video CD and audio CD only)
Sections of a picture or a musical piece on a video CD or an audio CD. Each track is assigned a track number, enabling you to locate the track you want.

Scene
On a video CD with PBC (Playback control) functions, moving pictures and still pictures are divided into sections called “Scenes”. Each scene is displayed in the menu screen and assigned a scene number, enabling you to locate the scene you want.
A scene is composed of one or several tracks.

Types of video CDs

There are two types of video CDs:

Video CDs equipped with PBC (Version 2.0)
PBC (Playback control) functions allow you to interact with the system via menus, search functions, or other typical computer-like operations. Moreover, still pictures of high resolution can be played if they are included in the disc.

Video CDs not equipped with PBC (Version 1.1)
Operated in the same way as audio CDs, these discs allow playback of video pictures as well as sound, but they are not equipped with PBC.

Precautions

Handling the unit

When shipping the unit
The original shipping carton and packing materials come in handy. For maximum protection, re-pack the unit as it was originally packed at the factory.

When setting up the unit
The picture and sound of a nearby TV, VCR, or radio may be distorted during playback. In this case, position the unit away from the TV, VCR, or radio, and turn off the unit after removing the disc.

To keep the exterior surfaces clean
Do not use volatile liquids, such as insecticide spray, near the unit. Do not allow rubber or plastic products to contact the unit for a long period of time. They will leave marks on the surface.

To move the unit
When you move the player, take out any discs. If you don't, the discs may be damaged or be dropped to the internal of the DVD player.

Cleaning the unit

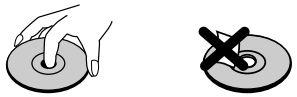
To clean the cabinet
Use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents, such as alcohol, benzine, or thinner, as these might damage the surface of the unit.

To obtain a clear picture
The DVD player is a high-tech, precision device. If the optical pick-up lens and disc drive parts are dirty or worn down, the picture quality will be poor.
Regular inspection and maintenance are recommended after every 1,000 hours of use. (This depends on the operating environment.)
For details, please contact your nearest dealer.

Notes on Discs

Handling discs

Do not touch the playback side of the disc.
Hold the disc by the edges so that fingerprints will not get on the surface.
Do not stick paper or tape on the disc.

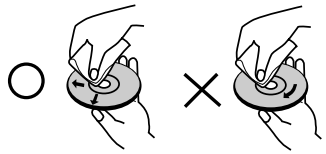


Storing discs

After playing, store the disc in its case.
Do not expose the disc to direct sunlight or sources of heat, or leave it in a parked car exposed to direct sunlight, as there may be a considerable temperature increase inside the car.

Cleaning discs

Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the center out.



Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.

About Symbols

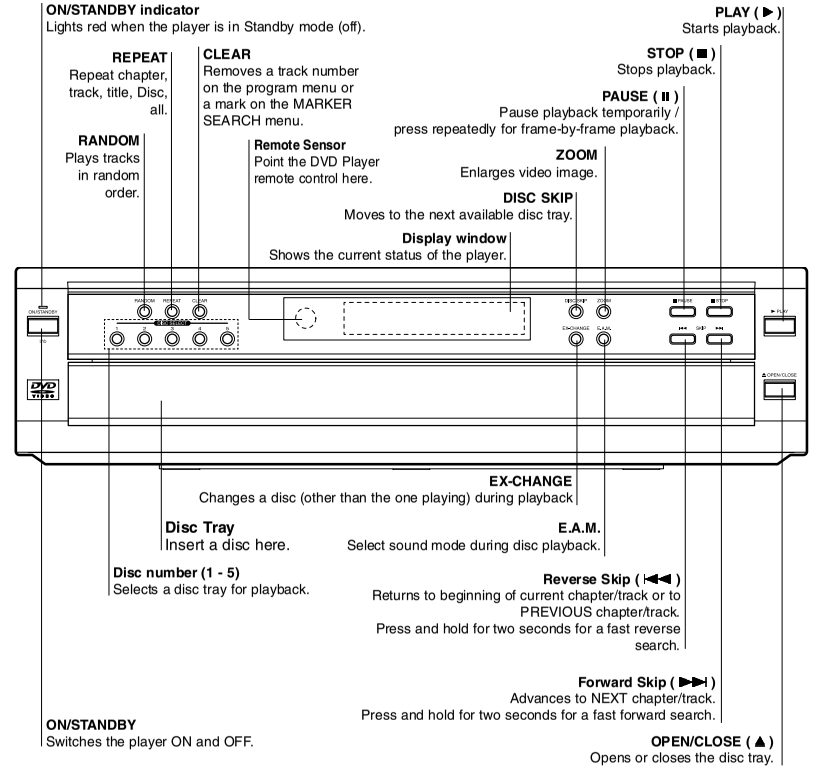
About the ⃠ symbol display

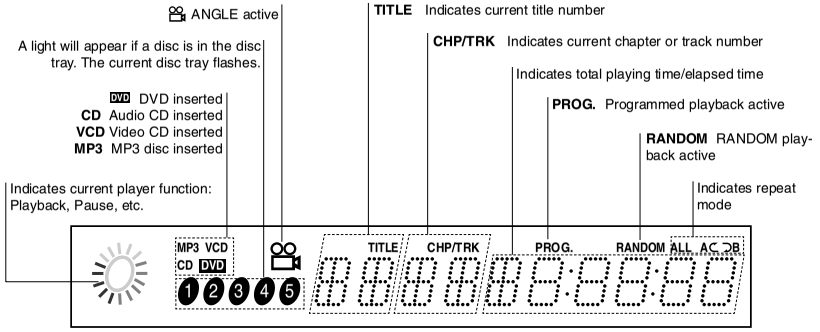
" ⃠ " may appear on the TV screen during operation. This icon means the function explained in this owner's manual is not available on that specific DVD video disc.

About the disc symbols for instructions

A section whose title has one of the following symbol is applicable only to the disc represented by the symbol.

- DVD — DVD
- VCD2.0 — Video CDs with the PBC (playback control) function.
- VCD1.1 — Video CDs without the PBC (playback control) function.
- CD — Audio CDs.
- MP3 — MP3 disc.


ON/STANDBY indicator
Lights red when the player is in Standby mode (off).
PLAY (▶)
Starts playback.
REPEAT
Repeat chapter, track, title, Disc, all.
CLEAR
Removes a track number on the program menu or a mark on the MARKER SEARCH menu.
STOP (■)
Stops playback.
PAUSE (⏸)
Pause playback temporarily / press repeatedly for frame-by-frame playback.
RANDOM
Plays tracks in random order.
Remote Sensor
Point the DVD Player remote control here.
ZOOM
Enlarges video image.
DISC SKIP
Moves to the next available disc tray.
Display window
Shows the current status of the player.
EX-CHANGE
Changes a disc (other than the one playing) during playback
Disc Tray
Insert a disc here.
E.A.M.
Select sound mode during disc playback.
Disc number (1 - 5)
Selects a disc tray for playback.
Reverse Skip (⏮)
Returns to beginning of current chapter/track or to PREVIOUS chapter/track.
Press and hold for two seconds for a fast reverse search.
Forward Skip (⏭)
Advances to NEXT chapter/track.
Press and hold for two seconds for a fast forward search.
ON/STANDBY
Switches the player ON and OFF.
OPEN/CLOSE (▲)
Opens or closes the disc tray.


ANGLE active
A light will appear if a disc is in the disc tray. The current disc tray flashes.
DVD DVD inserted
CD Audio CD inserted
VCD Video CD inserted
MP3 MP3 disc inserted
Indicates current player function: Playback, Pause, etc.
TITLE Indicates current title number
CHP/TRK Indicates current chapter or track number
Indicates total playing time/elapsed time
PROG. Programmed playback active
RANDOM RANDOM playback active
Indicates repeat mode
MP3 VCD
CD DVD
TITLE
CHP/TRK
PROG.
RANDOM ALL A-B

Remote Control

OPEN/CLOSE
Opens and closes the disc tray.

GUI DISPLAY
Accesses on-screen display

SETUP
Accesses or removes setup menu.

TOP MENU
Displays the Title menu of the disc if available.

◄ ► ▲ ▼ (left/right/up/down)
Selects an item in the menu.

CLEAR
Removes a track number on the program menu or a mark on the MARKER SEARCH menu.

PAUSE/STEP (❚❚ / ❚►) •
Pauses playback temporarily / press repeatedly for frame-by-frame playback.

STOP (■) •
Stops playback.

Forward SKIP (►►❙) •
Advances to next chapter or track.

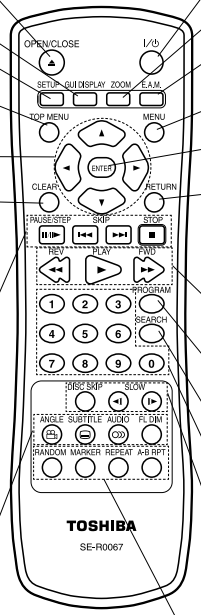
Reverse SKIP (❙◄◄) •
Returns to beginning of current chapter or track or go to previous chapter or track.

ANGLE •
Selects a DVD camera angle if available

SUBTITLE •
Selects a subtitle language.

AUDIO •
Selects an audio language (DVD) or an audio channel (CD).

FL DIM •
Controls the Display Window's light.



POWER
Switches DVD Player ON and OFF.

ZOOM
Enlarges video image.

E.A.M.
Select sound mode during disc playback.

MENU
Accesses menu on a DVD disc.

ENTER
Acknowledges menu selection.

RETURN
- Removes the setup menu.
- Displays the menu of a video CD with PBC.

• Reverse SCAN (◄◄)
Search backward.

• PLAY (►)
Starts playback.

• Forward SCAN (►►)
Search forward.

PROGRAM
Accesses or removes Program menu.

SEARCH
Displays MARKER SEARCH menu.

0-9 number buttons
Selects numbered items in a menu.

• Reverse SLOW (◄)
Reverse slow playback.

• Forward SLOW (►)
Forward slow playback.

• DISC SKIP
Moves to the next available disc tray.

• RANDOM
Plays tracks in random order.

• MARKER
Marks any point during playback.

• REPEAT
Repeat chapter, track, title, all.

• A-B RPT
Repeat sequence.

Remote Control Operation Range

Point the remote control at the remote sensor and press the buttons.

- **Distance:** About 23 ft (7 m) from the front of the remote sensor
- **Angle:** About 30° in each direction of the front of the remote sensor

Remote control battery installation

Detach the battery cover on the rear of the remote control, and insert two R03 (size AAA) batteries with ⊕ and ⊖ aligned correctly.

⚠ **Caution**
Do not mix old and new batteries. Never mix different types of batteries (standard, alkaline, etc.).

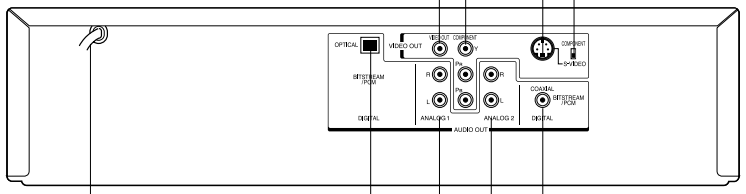
Rear Panel

VIDEO OUTPUT Switch
Select either S-VIDEO or COMPONENT, depending on how you connected the DVD Player to the TV.

S-VIDEO OUT
Connect to a TV with S-Video inputs.

COMPONENT SCAN VIDEO OUT (Y PB PR)
Connect to a TV with Y PB PR inputs.

VIDEO OUT
Connect to a TV with video inputs.



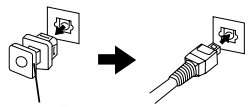
AC Power Cord
Plug into the power source.

OPTICAL (Digital audio out jack)
Connect to digital (optical) audio equipment.

ANALOG AUDIO OUT (Left/Right) 1, 2
Connect to an amplifier, receiver or stereo system.

COAXIAL (Digital audio out jack)
Connect to digital (coaxial) audio equipment.

Dust protection cap
Remove the dust protection cap from the OPTICAL DIGITAL OUT jack and connect the optical digital cable (not supplied) securely so that the configurations of both the cable and the connector match. Keep the dust protection cap and always reattach the cap when not using the connector to protect against dust intrusion.



Dust protection cap

⚠ **Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.**

Tips

- Depending on your TV and other equipment you wish to connect, there are various ways you could connect the player. Use only one of the connections described below.
- Please refer to the manuals of your TV, VCR, Stereo System or other devices as necessary to make the best connections.
- For better sound reproduction, connect the player's AUDIO OUT jacks to the audio in jacks of your amplifier, receiver, stereo or audio/video equipment. See "Connecting to optional equipment" on page 11.

Caution

– Make sure the DVD Player is connected directly to the TV. Tune the TV to the corresponding video input.
– Do not connect the DVD Player's AUDIO OUT jack to the phono in jack (record deck) of your audio system.
– Do not connect your DVD Player via your VCR. The DVD image could be distorted by the copy protection system.

Connecting to a TV

- Make one of the following connections, depending on the capabilities of your existing equipment.
- When using the COMPONENT VIDEO OUT jacks, set the VIDEO OUTPUT switch to COMPONENT. When using the S-VIDEO OUT jack, set the VIDEO OUTPUT switch to S-VIDEO.

Video connection

1 Connect the VIDEO OUT jack on the DVD Player to the video in jack on the TV using the video cable supplied **(V)**.

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV **(A)** using the supplied audio cables.

S-Video connection

1 Connect the S-VIDEO OUT jack on the DVD Player to the S-Video in jack on the TV using the optional S-Video cable **(S)**.

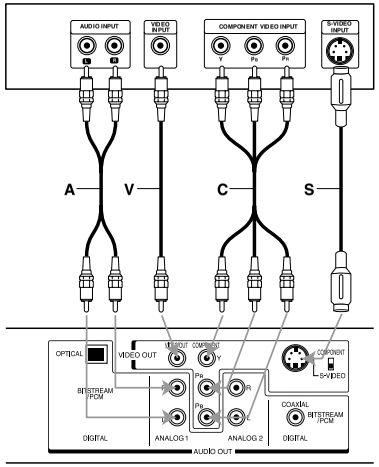
2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV **(A)** using the supplied audio cables.

Component Video (Color Stream®) connection

1 Connect the COMPONENT VIDEO OUT jacks on the DVD Player to the corresponding in jacks on the TV using an optional Y P_B P_R cable **(C)**.

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV **(A)** using the supplied audio cables.

Rear of TV



Rear of DVD player

Connecting to Optional Equipment

Connecting to an amplifier equipped with two channel analog stereo or Dolby Surround

Connect the Left and Right AUDIO OUT jacks on the DVD Player to the audio left and right in jacks on your amplifier, receiver or stereo system, using the supplied audio cables **(A)**.

Connecting to an amplifier equipped with two channel digital stereo (PCM) or to an Audio/ Video receiver equipped with a multi-channel decoder (Dolby Digital™, MPEG 2 or DTS)

1 Connect one of the DVD Player's DIGITAL AUDIO OUT jacks (OPTICAL **O** or COAXIAL **X**) to the corresponding in jack on your amplifier. Use an optional digital (optical **O** or coaxial **X**) audio cable.

2 You will need to activate the player's digital output. (See "Digital Audio Output" on page 14).

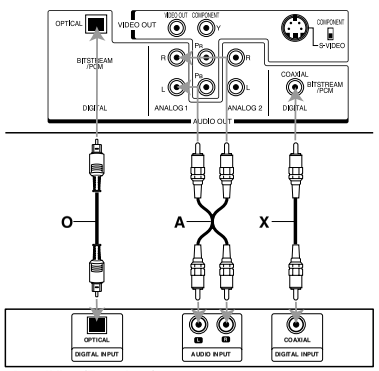
Digital Multi-channel sound

A digital multi-channel connection provides the best sound quality. For this you need a multi-channel Audio/Video receiver that supports one or more of the audio formats supported by your DVD Player (MPEG 2, Dolby Digital and DTS). Check the receiver manual and the logos on the front of the receiver.

Notes

– If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, distorted sound or no sound at all.
– Six Channel Digital Surround Sound via digital connection can only be obtained if your receiver is equipped with a Digital Multi-channel decoder.
– To confirm the audio format of the current DVD selection display, press AUDIO.
– Repeated pressing of the AUDIO button may allow you to select between various audio formats available on the disc.

Rear of DVD player



Amplifier (Receiver)

Note

This player does not perform internal (2 channel) decoding of a DTS sound track. To enjoy DTS multi channel surround, you must connect this player to a DTS compatible receiver via one of this player's digital audio outputs.

General Explanation

This manual gives basic instructions for operating the DVD Player. Some DVDs require specific operation or allow only limited operation during playback. When this occurs, the symbol ⃠ appears on the TV screen, indicating that the operation is not permitted by the DVD Player or is not available on the disc.

On-Screen Display

General playback status can be displayed on the TV screen. Some items can be changed on the menu.

On-screen display operation

1 **Press GUI DISPLAY during playback.**

2 **Press ▲ or ▼ to select an item.**
The selected item will be highlighted.

3 **Press ◀ or ▶ to change the setting of an item.**
The number buttons can be also be used for setting numbers (e.g., title number). For some functions, press ENTER to execute the setting.

Repeat mode Icons

- Repeat Title
- Repeat Chapter
- Repeat Track (non-PBC Video CDs only)
- Repeat All Tracks (non-PBC Video CDs only)
- Repeat A-B
- Repeat Off
- Resume play from this point
- ⃠ Action prohibited or not available

Notes

- Some discs may not provide all of the features on the on-screen display example shown below.
- If no button is pressed for 10 seconds, the on-screen display disappears.

DVD

Items		Function (Press ▲/▼ to select desired item)	Selection Method
Title Number	1/3	**Shows the current title number and total number of available titles, and** skips to the desired title number.	◀ / ▶, or Numbers, ENTER
Chapter Number	1/12	**Shows the current chapter number and total number of available chapters, and** skips to the desired chapter number.	◀ / ▶, or Numbers, ENTER
Time search	0:16:57	**Shows the elapsed playing time, and** searches a point by elapsed time method.	Numbers, ENTER
Audio language and Digital Audio Output mode	1 ENG DD 6 CH	**Shows the current audio soundtrack language, encoding method and channel number, and** changes you make to the setting.	◀ / ▶
Subtitle language	OFF	**Shows the current subtitles language, and** changes you make to the setting.	◀ / ▶
Angle	1/1	**Shows the current angle number and total number of angles, and** changes you make to the angle number.	◀ / ▶
Sound	NORM.	**Shows the current sound mode, and** changes you make to the setting.	◀ / ▶

VCD2.0 VCD1.1

Items		Function (Press ▲/▼ to select desired item)	Selection Method
Track Number	1/4	**Shows the current track number, total number of tracks and PBC On mode, and** skips to the desired track number.	◀ / ▶, or Numbers, ENTER
Time	0:16:57	**Shows the elapsed playing time (Display only)**	–
Audio Channel	STER.	**Shows the audio channel, and** changes you make to the audio channel.	◀ / ▶
Sound	NORM.	**Shows the current sound mode, and** changes you make to the setting.	◀ / ▶

Initial Settings

You can set your own Personal Preferences on the player.

Initial Settings General Operation

1 **Press SETUP.**
The setup menu appears.

2 **Press ▲/▼ to select the desired item.**
The screen will show the current setting for the selected item, as well as alternate setting(s).

3 **While the desired item is selected, press ▶, then ▲/▼ to select the desired setting.**

4 **Press ENTER to confirm your selection.**
Some items require additional steps.

5 **Press SETUP, RETURN or PLAY to exit the setup menu.**

Language

Disc Language DVD

Select a language for the disc's Menu, Audio and Subtitle.
Original : The original language set for the disc is selected.
Other : To select another language, press number buttons to enter the corresponding 4-digit number according to the language code list on page 24. If you enter the wrong language code, press CLEAR.

Menu Language

Select a language for the setup menu. This is the menu you see when you press SETUP.

Picture

TV Aspect DVD

4:3 Letterbox: Select when a standard 4:3 TV is connected. Displays theatrical images with masking bars above and below the picture.
4:3 Panscan: Select when a standard 4:3 TV is connected. Displays pictures cropped to fill your TV screen. Both side of the original picture may be cut off.
16:9 Wide: Select when a 16:9 wide TV is connected.

Sound

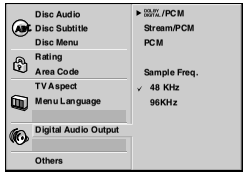
Digital Audio Output

Each DVD disc has a variety of audio output options. Set the player's Digital Audio Output according to the type of audio system you use.

DOLBY DIGITAL/PCM: Select "DOLBY DIGITAL/PCM" if you connected the DVD Player's DIGITAL OUT jack to a Dolby Digital decoder (or an amplifier or other equipment with a Dolby Digital decoder).

Stream/PCM: Select "Stream/PCM" if you connected the DVD Player's DIGITAL OUT jack to an amplifier or other equipment with a DTS decoder, Dolby Digital decoder or MPEG decoder.

PCM: Select when connected to a 2 channel digital stereo amplifier. The DVD player outputs sounds in the PCM 2ch format when you play a DVD video disc recorded on the Dolby Digital, MPEG1 or MPEG2 recording system.



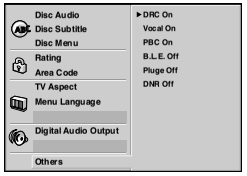
Sample Frequency

To change the Sample Frequency setting, first select the desired Digital Audio Output as indicated as above. If your receiver or amplifier is NOT capable of handling 96KHz signals, select 48KHz. When this choice is made, this unit will automatically convert any 96KHz signals to 48KHz so your system can decode them. If your receiver or amplifier is capable of handling 96KHz signals, select 96KHz. When this choice is made, this unit will pass all signals through without processing.

Others

The DRC, Vocal, PBC, B.L.E., Pluge and DNR settings can be changed.

- Press ▲/▼ to select the desired item and press ENTER. The setting of the selected item alternates between On and Off.



Dynamic Range Control (DRC)

With the DVD format, you can hear a program's soundtrack in the most accurate and realistic presentation possible, thanks to digital audio technology. However, you may wish to compress the dynamic range of the audio output (the difference between the loudest sounds and the quietest ones). Then, you may listen to a movie at a lower volume without losing clarity of sound. Set DRC to On for this effect.

Vocal

Set Vocal to On only when a multi-channel karaoke DVD is playing. The karaoke channels on the disc will mix into normal stereo sound.

PBC

Set Playback Control (PBC) to On or Off.
On: Video CDs with PBC are played according to the PBC.
Off: Video CDs with PBC are played the same way as Audio CDs.

B.L.E. (Black Level Expansion)

To select the black level of playback pictures. Set your preference and monitor's ability.
On: Expanded grey scale. (0 IRE cut off)
Off: Standard grey scale. (7.5 IRE cut off)

Pluge (Blacker than Black)

For proper adjustment of your television brightness settings utilizing a commercially available test disc.
On: Select when you adjust the level of your TV using a commercially available test disc that contains pluge signals.
Off: For normal use.

DNR (Digital Noise Reduction)

You can view a picture with less video noise.
DNR1: Normal level
DNR2: Expanded level.
Off: Off.

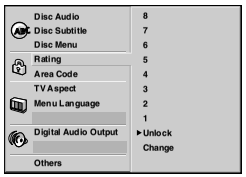
Notes

– Actual picture enhancement may vary depending on the quality of the disc.
– While the DNR2 (expanded level) can provide additional improvement in the reduction of noise in the video signal, it may produce undesirable picture artifacts on some discs. Should this occur, select a more appropriate DNR level (normal or off).
– Depending on the disc, some picture detail may be lost by the picture enhancement.
– A DVD audio disc with Dolby Digital or DTS soundtrack may be played, some DVD audio discs include moving pictures which may be modified by the above processes.

Parental Control

Rating DVD

Movies on DVDs may contain scenes not suitable for children. Therefore, discs may contain Parental Control information that applies to the complete disc or to certain scenes on the disc. These scenes are rated from 1 to 8, and alternatively, more suitable scenes are available for selection on some discs. Ratings are country-dependent. The Parental Control feature allows you to prevent discs from being played by your children or to have certain discs played with alternative scenes.



1 **Select "Rating" on the Setup menu using the ▲ and ▼ buttons.**

2 **While "Rating" is selected, press ▶.**

3 **When you have not entered a password yet;**
Enter a 4-digit password using the numbered buttons to create a personal 4-digit security password, then press ENTER. And enter the 4-digit password again and press ENTER to verify.
When you have already entered a password;
Enter a 4-digit password using the numbered buttons to confirm the personal 4-digit security password, then press ENTER.

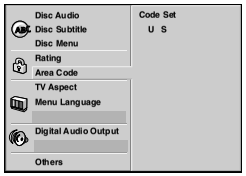
If you make a mistake before pressing ENTER, press CLEAR and enter 4-digit security password again.

4 **Select a rating from 1 to 8 using the ▲/▼ buttons. One (1) has the least playback restrictions. Eight (8) has the most playback restrictions.**
Unlock: *If you select Unlock, Parental Control is not active. The disc will play in full.*
Ratings 1 to 8: *Some discs contain scenes not suitable for children. If you set a rating for the player, all disc scenes with the same rating or lower will be played. Higher rated scenes will not be played unless an alternative scene is available on the disc. The alternative must have the same rating or a lower one. If no suitable alternative is found, playback will stop. You must enter the 4-digit password or change the rating level in order to play the disc.*

5 **Press ENTER to confirm your rating selection, then press SETUP to exit the menu.**

Area Code DVD

Enter the code of a country/area whose standards were used to rate the DVD video disc, referring to the list (See "Area Code List", page 25.).



1 **Select Area Code using the ▲/▼ buttons on the setup menu.**

2 **While Area Code is selected, press ▶.**

3 **Follow step 3 of "Rating" on left.**

4 **Select the first character using the ▲/▼ buttons.**

5 **Shift the cursor using ◀/▶ buttons and select the second character using ▲/▼ buttons.**

6 **Press ENTER to confirm your area code selection, then press SETUP to exit the menu.**

Note

Confirmation of the 4-digit password is necessary when the code is changed (see "Changing the 4-digit code" below).

Changing the 4-digit code

1 Follow Steps 1-2 as shown above to the left (Rating).
2 Enter the old code, then press ENTER.
3 Select Change using the ▲/▼ buttons then press ENTER.
4 Enter the new 4-digit code, then press ENTER.
5 Enter exactly the same code a second time and verify by pressing ENTER.
6 Press SETUP to exit the menu.

If you forget your 4-digit code

If you forget your password, to clear the current password, follow the procedure below.

1 Press SETUP to display the setup menu.
2 Use the Number buttons to enter the 6-digit number "210499."
The 4-digit password is cleared. "P CLr" appears on the display. The message will appear if the disc tray is closed. It will be on the display until you try another feature.
3 Enter a new code as shown above to the left (Rating).

Playing a DVD and Video CD

Playback Setup DVD VCD2.0 VCD1.1

- Turn on the TV and select the video input source connected to the DVD player.
- Audio system: Turn on the audio system and select the input source connected to the DVD player.

1 Press OPEN/CLOSE to open the disc tray.

2 Load your chosen disc in the tray, with the label facing up.
When a double-sided DVD is inserted, make sure the side you want to play is facing up.
- Discs can be loaded one at a time by pressing DISC SKIP to rotate the carousel.

3 Press OPEN/CLOSE to close the tray.
READING appears on the TV screen, and playback starts automatically. If playback does not start, press PLAY.
In some cases, the disc menu might appear instead.

If a disc menu screen is displayed

The menu screen may be displayed first after loading a DVD or Video CD which contains a menu.

DVD

Use the ◀ ▶ ▲ ▼ buttons to select the title/chapter and additional selections you want, then press ENTER to start playback.
Press TOP MENU or MENU to return to the disc menu screen.

VCD2.0

- Use the number buttons to select the track you want to view.
  Press RETURN to return to the disc menu screen.
- Menu setting and the exact operating procedures for using the disc menu may differ depending on the disc. Follow the instructions on each menu screen.
  You also may set PBC to Off under setup. See page 14.

Notes

– If Parental Control is set and the disc is not within the Rating settings (not authorized), the 4-digit code must be entered and/or the disc must be authorized (see "Parental Control", on page 15).
– DVDs may have a region code.
– Your player will not play discs that have a region code different from your player. The region code for this player is 1 (one).

Exchanging discs during playback

- Press EX-CHANGE on the front panel during playback to open the disc tray.
- Press DISC SKIP to rotate the disc trays to the desired position. The carousel will move clockwise by one disc tray.
- Exchange the discs and press EX-CHANGE or OPEN/CLOSE to close the disc tray.

Note

– The disc tray which was in the play position can not be exchanged.

Skipping discs

Press DISC SKIP during play or when playback is stopped.

Notes

– When DISC SKIP is pressed, the disc trays rotate and play begins from the beginning of the next disc.
– If there is no disc on the next disc tray, the next disc tray will be selected.
– When DISC SKIP is pressed during playback of disc 5, playback of disc 1 will start.

Exchanging the disc and starting playback

1. Press OPEN/CLOSE during playback or when playback is stopped.
   Play stops (if pressed during playback), the disc tray opens and the disc tray that was in the play position comes to the front.
2. Exchange the disc in the front.
3. Press OPEN/CLOSE or PLAY again.
   The tray closes and playback begins (with the disc that was in front).

General Features

Note

Unless stated otherwise, all operations described use the remote control. Some features may also be available on the Setup menu.

Moving to another TITLE DVD

When a disc has more than one title, you can move to another title as follows:
- Press GUI DISPLAY when playback is stopped. From the title function, press the appropriate numbered button (0-9) to select a title number.

Moving to another CHAPTER/TRACK

DVD VCD1.1

When a title on a disc has more than one chapter or a disc has more than one track, you can move to another chapter/track as follows:
- Press SKIP ⏮ or ⏭ briefly during playback to select the next chapter/track or to return to the beginning of the current chapter/track.
- Press ⏮ twice briefly to step back to the previous chapter/track.
- To go directly to any chapter during DVD playback, press GUI DISPLAY. Then, press ▲/▼ to select C (chapter) (or for a Video CD, select T for track). Then, enter the chapter/track number using the numbered buttons (0-9).

Note

For two-digit numbers, press the buttons in rapid succession.

Still Picture and Frame-by-frame playback

DVD VCD2.0 VCD1.1

1 Press PAUSE/STEP during playback.
The player will now go into PAUSE mode.
2 You can advance the picture frame by frame by pressing PAUSE/STEP repeatedly on the remote control.

Slow Motion DVD VCD2.0 VCD1.1

1 Press SLOW ◀❙ or ❙▶ during playback.
The player will enter SLOW mode.
2 Use the SLOW ◀❙ or ❙▶ to select the required speed: ◀❙ 1/16, ◀❙ 1/8, ◀❙ 1/4 or ◀❙ 1/2 (reverse), or ❙▶ 1/16, ❙▶ 1/8, ❙▶ 1/4 or ❙▶ 1/2 (forward).
3 To exit slow motion mode, press PLAY.

Note

Slow motion playback in reverse is not applicable for Video CD.

Search DVD VCD2.0 VCD1.1

1 Press REV ◀◀ or FWD ▶▶ during playback.
The player will now go into SEARCH mode.
2 Press REV ◀◀ or FWD ▶▶ repeatedly to select the required speed: ◀◀X2, ◀◀X4, ◀◀X16, ◀◀X100 (backward) or ▶▶X2, ▶▶X4, ▶▶X16, ▶▶X100 (forward).
With a Video CD, the Search speed changes: ◀◀X2, ◀◀X4, ◀◀X8 (backward) or ▶▶X2, ▶▶X4, ▶▶X8 (forward).
3 To exit SEARCH mode, press PLAY.

Random Karaoke DVD VCD1.1

1 Press RANDOM during playback or in stop mode.
The unit automatically begins Random Playback and "RANDOM (1-3)" appears on the TV screen.
- RANDOM1: Plays all the tracks on a single disc in random order and then stops.
- RANDOM2: Plays all the tracks on current disc in random order and then plays all the tracks on each succeeding disc in random order and then stops.
- RANDOM3: Plays 2 tracks randomly from a disc and then plays 2 tracks randomly from a different disc until all tracks on all discs have been played.

2 To return to normal playback, press RANDOM until "RANDOM" disappears on the display window.

Tips

By pressing SKIP ⏮ or ⏭ during Random playback, the unit selects another title (track) and resumes Random playback.

Note

This function only works with DVD Karaoke discs and video CD without PBC.

General Features (cont'd)

Repeat DVD VCD2.0 VCD1.1

DVD Video Discs - Repeat Chapter/Title/Off

1 To repeat the chapter currently playing, press REPEAT.
The Repeat Chapter icon appears on the TV screen.

2 To repeat the title currently playing, press REPEAT a second time.
The Repeat Title icon appears on the TV screen.

3 To exit Repeat mode, press REPEAT a third time.
The Repeat Off icon appears on the TV screen.

Video CDs - Repeat Track/Disc/All/Off

1 To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the TV screen.

2 To repeat the disc currently playing, press REPEAT a second time.
The Repeat Disc icon appears on the TV screen.

3 To Repeat of entire all disc contents, press REPEAT a third time.
The Repeat All icon appears on the TV screen.

4 To exit Repeat mode, press REPEAT a fourth time.
The Repeat Off icon appears on the TV screen.

Note
On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Repeat function. See page 14.

Repeat A-B DVD VCD2.0 VCD1.1

To repeat a sequence in a title:

1 Press A-B RPT at your chosen starting point.
A- appears briefly on the TV screen.

2 Press A-B RPT again at your chosen end point.
A-B appears briefly on the TV screen, and the repeat sequence begins (a-b repeat appears on the player's display).

3 To cancel the sequence, press A-B RPT.

Time Search DVD

The Time Search function allows you to start playing at any chosen time on the disc.

1 Press GUI DISPLAY during playback. The on-screen display appears on the screen.
The Time Search box shows the elapsed playing time of the current disc.

2 Within 10 seconds, press ▲/▼ to select the Time Search icon in the on-screen display.
The "-:--:--" appears in the Time Search box.

3 Within 10 seconds, use the number buttons to enter the required start time. Enter hours, minutes and seconds from left to right in the box.
If you enter the wrong numbers, press CLEAR to remove the numbers you entered. Then enter the correct numbers.

4 Within 10 seconds, press ENTER to confirm the start time.
Playback starts from the selected time on the disc. If you enter an invalid time, playback will continue from the current point.

Selecting the sound enhancement

DVD

Press E.A.M. to select the sound enhancement during playback.

NORM. : Normal sound
3D SUR: This unit can produce a 3D Surround effect, which simulates multi-channel audio playback from two conventional stereo speakers, instead of the five or more speakers normally required to listen to multi-channel audio from a home theater system.
DIALOGUE: To control critical center channel information to make dialogue more intelligible (only when playing a DVD video disc recorded on the Dolby Digital recording system).
- To use this enhancement on sounds output from the DIGITAL AUDIO OUT jack, be sure to set "Digital Audio Output" to "PCM". See page 14.

Zoom DVD VCD2.0 VCD1.1

The Zoom function allows you to enlarge the video image and to move the focus point of enlarged image.

1 Press ZOOM during playback or still playback to activate the Zoom function.
If you press ZOOM repeatedly, the magnification level increases up to six times.

2 Use the ◀/▶/▲/▼ buttons to move focus point zoomed picture.

3 Press CLEAR to resume normal playback or return to the paused image.

Note
- The zoom function may not work for some DVDs.
- The zoom function may not work on multi-angle scenes.

General Features (cont'd)

Marker Search DVD VCD2.0 VCD1.1

You can start playback from a memorized point. Up to nine points can be memorized.
To enter a mark, follow these steps.

1 During disc playback, press MARKER when playback reaches the spot that you want to memorize.
The Marker icon will appear on the TV screen briefly.

2 Repeat step 1 to enter up to nine Marker points on a disc.

To Recall a Marked Scene

1 During disc playback, press SEARCH.
The MARKER SEARCH menu will appear on the screen.

2 Within 10 seconds, press ◀/▶ to select a Marker number that you want to recall.

3 Press ENTER.
Playback will start from the Marked scene.

4 To remove the MARKER SEARCH menu, press SEARCH.

To clear a Marked Scene

1 During disc playback, press SEARCH.
The MARKER SEARCH menu will appear on the screen.

2 Press ◀/▶ to select the Marker number that you want to erase.

3 Press CLEAR.
The Marker number will be erased from the list.

4 Repeat steps 2 and 3 to erase additional Marker numbers.

5 To remove the MARKER SEARCH menu, press SEARCH.

Note
All the markers are cleared when the power is turned off or the disc is removed.

Special DVD Features DVD

Checking the contents of DVD Video discs: Menus

DVDs may contain menus that allow you to access special features. To use the disc menu, press MENU. Then, press the appropriate number button to select an option. Or, use the ◀/▶/▲/▼ buttons to highlight your selection, then press ENTER.

Title Menu DVD

1 Press TOP MENU.
If the current title has a menu, the menu will appear on the screen. Otherwise, the disc menu may appear.

2 The menu can list camera angles, spoken language and subtitle options, and chapters for the title.

3 To remove the title menu, press TOP MENU again.

Disc Menu DVD

1 Press MENU.
The disc menu is displayed.

2 To remove the disc menu, press MENU again.

Camera Angle DVD

If the disc contains scenes recorded at different camera angles, you can change to a different camera angle during playback.
- Press ANGLE repeatedly during playback to select a desired angle.
The number of the current angle appears on the display.

Changing the Audio Language DVD

Press AUDIO repeatedly during playback to hear a different audio language or audio track.

Changing the Audio Channel VCD

Press AUDIO repeatedly during playback to hear a different audio channel (STEREO, LEFT or RIGHT).

Subtitles DVD

Press SUBTITLE repeatedly during playback to see the different subtitle languages.

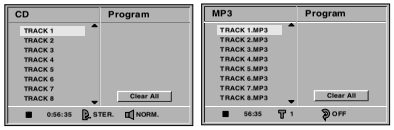
Note
If ⃠ appears, the feature is not available on the disc.

Operation with Audio CD and MP3 Disc

Playing an Audio CD and MP3 disc

The DVD Player can play MP3 formatted recordings on CD-ROM, CD-R or CD-RW discs.
Before playing MP3 recordings, read the notes on MP3 Recordings on page 22.

1 Insert a disc and close the tray.
The menu appears on the TV screen.



Audio CD menu **MP3 menu**

2 Press ▲/▼ to select a track then press PLAY.
Playback starts.
During playback, the current track's elapsed playing time will appear on the display.
Playback will stop at the end of the disc.

3 To stop playback at any other time, press STOP.

Pause CD MP3

1 Press PAUSE/STEP during playback.
2 To return to playback, press PLAY or press PAUSE/STEP again.

Moving to another Track CD MP3

- Press SKIP ⏮ or ⏭ once during playback to go to the next track or to return to the beginning of the current track.
- Press SKIP ⏮ twice briefly to step back to the previous track.
- In case of audio CD, to go directly to any track, enter the track number using the numbered buttons (0-9) during playback.

Repeat Track/All/Off CD MP3

1 To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the menu screen.
2 To repeat all tracks on a disc, press REPEAT a second time.
The Repeat All icon appears on the menu screen.
3 To cancel Repeat mode, press REPEAT a third time.
The Repeat Off icon appears on the menu screen.

Search CD

1 Press REV ◀◀ or FWD ▶▶ during playback.
The player will now go into SEARCH mode.
2 Press REV ◀◀ or FWD ▶▶ repeatedly to select the required speed: ◀◀X2, ◀◀X4, ◀◀X8 (backward) or ▶▶X2, ▶▶X4, ▶▶X8 (forward).
3 Search speed and direction are indicated on the menu screen.
4 To exit SEARCH mode, press PLAY.

Random CD

1 Press RANDOM during playback or when playback is stopped.
The unit automatically begins Random Playback and RANDOM or "RAND." appears on the display window and menu screen.
2 To return to normal playback, press RANDOM repeatedly until RANDOM or "RAND." disappears on the display window and menu screen.

Repeat A-B CD

To repeat a sequence.
1 During disc playback, press A-B RPT at your chosen starting point.
The Repeat icon and "A -" appears on the menu screen.
2 Press A-B RPT again at your chosen end point.
The Repeat icon and "A B" appears on the menu screen, and the sequence begins to play repeatedly.
3 To exit the sequence and return to normal play, press A-B RPT again.
The Repeat icon and "OFF" appears on the menu screen.

3D Surround CD

This unit can produce a 3D Surround effect, which simulates multi-channel audio playback from two conventional stereo speakers, instead of the five or more speakers normally required to listen to multi-channel audio from a home theater system.
1 Press E.A.M. to select 3D SUR during playback.
2 To turn off the 3D Surround effect, press E.A.M. again to select NORM.

Changing the Audio Channel CD

Press AUDIO repeatedly during playback to hear a different audio channel (STEREO, LEFT or RIGHT).

Programmed Playback CD MP3 VCD2.0 VCD1.1

Programmed Playback with Audio CD and MP3 Disc

Program allows you to store your favorite tracks for a particular disc in the player memory.

Program can contain 32 tracks (Audio CD) or 60 tracks (MP3 disc).

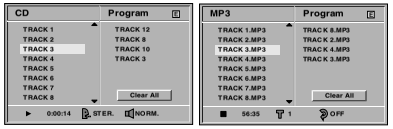
1 Insert the disc and close the tray.
The menu is displayed on the TV screen.

2 Press PROGRAM during playback or in the stop mode to enter the Program Edit mode.
The E mark will appear to the right of the word Program on the right side of the menu screen.

Note
Press PROGRAM to exit the Program Edit mode;
the E mark will disappear.

3 Press ▲/▼ to select a track then press ENTER to place the selected track on the Program list.

4 Repeat step 3 to place additional tracks on the Program list.



Audio CD menu **MP3 menu**

5 Press ▶.
The programmed track you selected last is highlighted on the program list.

6 Press ▲/▼ to select the track you want to start playing.
Press TOP MENU to move to the next page.
Press MENU to move to the previous page.

7 Press PLAY to start.
Playback begins in the order in which you programmed the tracks and "PROG." appears on the menu screen..
Playback stops after all of the tracks on the Program list have played once.

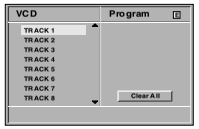
Note
The programmed tracks are cleared when the power is turned off or the disc is removed.

Programmed Playback with Video CD

Note
On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Program function. See page 14.

1 Insert Video CD and close the tray.

2 Press PROGRAM while playback is stopped.
The VCD Program menu will appear.



Note
Press RETURN or PROGRAM to exit the Program menu.

3 Follow steps 3-7 of "Programmed Playback with Audio CD and MP3 Disc" on left.

Repeat Programmed Tracks/All

- To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the menu screen.
- To repeat all tracks on the program list, press REPEAT a second time.
The Repeat All icon appears on the menu screen.
- To cancel Repeat mode, press REPEAT a third time.
The Repeat Off icon appears on the menu screen.

Erasing a Track from Program List

1 Press PROGRAM during playback or in the stop mode to enter the Program Edit mode.
The E mark will appear.
2 Press ▶ to move to the Program list.
3 Use ▲/▼ to select the track that you wish to erase from the Program list.
4 Press CLEAR.
The track will be erased from the Program list.

Erasing the Complete Program List

1 Follow steps 1-2 of "Erasing a Track from Program List" as above.
2 Use ▲/▼ to select "Clear All", then press ENTER.
The complete Program for the disc will be erased.
The programs are also cleared when the disc is removed.

To resume normal playback from programmed playback

Press and hold PROGRAM for 3 seconds until "PROG." indicator disappears in the display window.

Additional Information

Last Condition Memory

DVD CD VCD1.1

This player memorizes the last condition for the last disc you have watched. Settings remain in memory even if you remove the disc from the player or switch off the player. If you load a disc that has its settings memorized, the latest stop position is automatically recalled.

Notes

– Settings are stored in memory for use any time.
– This player does not memorize settings of a disc if you switch off the player before commencing playback.

Screen Saver

A screen saver image appears when you leave the DVD Player in stop mode for about five minutes.
After the Screen Saver has been engaged for about five minutes, the DVD Player will automatically turn itself off.

Video Mode Setting DVD VCD2.0 VCD1.1

- With certain discs, the playback picture may be flickering or Dot Crawl is shown on straight lines. That means Vertical interpolation or De-interlace is not perfectly matched with the disc. In this case, the picture quality may be improved by changing the video mode.
- To change the video mode, press and hold GUI DISPLAY about 3 seconds during disc playback. The new video mode number selected is displayed on the TV screen. Check whether the video quality has improved. If not, repeat the above procedure until picture quality is improved.
- Video mode change sequence:
  Video1 → Video2 → Film → Adapt → Auto.
- If you turn off the power, the video mode will return to initial state (Auto).

Detailed Description of each Video Mode

Auto : The image material types of the DVD video (film material or video material) are distinguished by this player based on the disc information.

Video1 : Suitable for playing the disc of video material which has comparatively little motion.

Video2 : Suitable for playing the disc of video material which has comparatively more motion.

Film : Suitable for playing the disc of film material or of video material recorded by the progressive scan method.

Adapt : Determines the material type (film or video) during playback disc, and automatically selects the proper mode. Suitable for playing a disc comprised of film and video based content.

Dimmer Function

You can control the Display Window's brightness in 3 steps. Each press of the FL DIM button modifies the Display Window's brightness in the following order:

Normal → Dim → Display Off → Normal

Notes on MP3 Discs

About MP3

- An MP3 file is audio data compressed by using the MPEG1 audio layer-3 file-coding scheme. We call files that have the ".mp3" file extension "MP3 files".
- The player can not read an MP3 file that has a file extension other than ".mp3".
- The player can not read a non MP3 encoded file that has a file extension ".mp3".

MP3 Disc compatibility with this player is limited as follows:

1. Sampling Frequency / only at 44.1kHz
2. Bit rate / within 32 - 320kbps
3. CD-R physical format should be "ISO 9660"
4. If you record MP3 files using the software which cannot create a FILE SYSTEM, for example "Direct-CD" etc., it is impossible to playback MP3 files. We recommend that you use "Easy-CD Creator", which creates an ISO9660 file system.
5. A single session disc requires MP3 files in the first track. If there is no MP3 file in the 1st track, it cannot playback MP3 files. If you wish to playback MP3 files, format all the data in the disc or use a new one.
6. We do not recommend using CD-RW discs. Please use finished CD-R discs only.
7. File names should be named using 8 letters or less and must incorporate ".mp3" extension
   e.g. "********.MP3".
8. Do not use special letters such as "_?!><+*}{`[@];:\/.," etc.
9. Total number of files on the disc should be less than 200.
10. Use 74 minute CD-R discs (650M), Do not use 80 minute CD-R (700M) software

This DVD player requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3 files). That require certain pre-existing conditions (see above) to insure compatible playback.

Customers should also note that permission is required in order to download MP3 files and music from the Internet. TOSHIBA cannot grant such permission. Permission should always be sought from the copyright owner.

Troubleshooting

Check the following guide for the possible cause of a problem before contacting service.

Symptom	Cause	Correction
No power.	• The power cord is disconnected.	• Plug the power cord into the wall outlet securely.
The power is on, but the DVD player does not work.	• No disc is inserted.	• Insert a disc. (Check that the DVD or, audio CD indicator in the display window is lit.)
No picture.	• The TV is not set to receive DVD signal output.	• Select the appropriate video input mode on the TV so the picture from the DVD player appears on the TV screen.
	• The video cable is not connected securely.	• Connect the video cable into the jacks securely.
	• The connected TV power is turned off.	• Turn on the TV.
No sound.	• The equipment connected with the audio cable is not set to receive DVD signal output.	• Select the correct input mode of the audio receiver so you can listen to the sound from the DVD player.
	• The audio cables are not connected securely.	• Connect the audio cable into the jacks securely.
	• The power of the equipment connected with the audio cable is turned off.	• Turn on the equipment connected with the audio cable.
	• The Digital Audio Output is set to the wrong position.	• Set the Digital Audio Output to the correct position, then turn on the DVD player again by pressing POWER.
The playback picture is poor.	• The disc is dirty.	• Clean the disc.
The DVD player does not start playback.	• No disc is inserted.	• Insert a disc. (Check that the DVD, or audio CD indicator in the DVD display is lit.)
	• An unplayable disc is inserted.	• Insert a playable disc. (Check the disc type, color system and Regional code.)
	• The disc is placed upside down.	• Place the disc with the playback side down.
	• The disc is not placed within the guide.	• Place the disc on the disc tray correctly inside the guide.
	• The disc is dirty.	• Clean the disc.
	• The Rating level is set.	• Cancel the Rating function or change the rating level.
The remote control does not work properly.	• The remote control is not pointed at the remote sensor of the DVD player.	• Point the remote control at the remote sensor of the DVD player.
	• The remote control is too far from the DVD player.	• Operate the remote control within about 23 ft (7 m).
	• There is an obstacle in the path of the remote control and the DVD player.	• Remove the obstacle.
	• The batteries in the remote control are exhausted.	• Replace the batteries with new ones.

Language Code List

Enter the appropriate code number for the initial settings “Disc Audio”, “Disc Subtitle” and/or “Disc Menu” (See page 13).

Code	Language	Code	Language	Code	Language	Code	Language
6565	Afar	7079	Faroese	7678	Lingala	8375	Slovak
6566	Abkhazian	7082	French	7679	Laothian	8376	Slovenian
6570	Afrikaans	7089	Frisian	7684	Lithuanian	8377	Samoan
6577	Ameharic	7165	Irish	7686	Latvian, Lettish	8378	Shona
6582	Arabic	7168	Scots Gaelic	7771	Malagasy	8379	Somali
6583	Assamese	7176	Galician	7773	Maori	8381	Albanian
6588	Aymara	7178	Guarani	7775	Macedonian	8382	Serbian
6590	Azerbaijani	7185	Gujarati	7776	Malayalam	8385	Sudanese
6665	Bashkir	7265	Hausa	7778	Mongolian	8386	Swedish
6669	Byelorussian	7273	Hindi	7779	Moldavian	8387	Swahili
6671	Bulgarian	7282	Croatian	7782	Marathi	8465	Tamil
6672	Bihari	7285	Hungarian	7783	Malay	8469	Telugu
6678	Bengali; Bangla	7289	Armenian	7784	Maltese	8471	Tajik
6679	Tibetan	7365	Interlingua	7789	Burmese	8472	Thai
6682	Breton	7378	Indonesian	7865	Nauru	8473	Tigrinya
6765	Catalan	7383	Icelandic	7869	Nepali	8475	Turkmen
6779	Corsican	7384	Italian	7876	Dutch	8476	Tagalog
6783	Czech	7387	Hebrew	7879	Norwegian	8479	Tonga
6789	Welsh	7465	Japanese	7982	Oriya	8482	Turkish
6865	Danish	7473	Yiddish	8065	Panjabi	8484	Tatar
6869	German	7487	Javanese	8076	Polish	8487	Twi
6890	Bhutani	7565	Georgian	8083	Pashto, Pushto	8575	Ukrainian
6976	Greek	7575	Kazakh	8084	Portuguese	8582	Urdu
6978	English	7576	Greenlandic	8185	Quechua	8590	Uzbek
6979	Esperanto	7577	Cambodian	8277	Rhaeto-Romance	8673	Vietnamese
6983	Spanish	7578	Kannada	8279	Rumanian	8679	Volapük
6984	Estonian	7579	Korean	8285	Russian	8779	Wolof
6985	Basque	7583	Kashmiri	8365	Sanskrit	8872	Xhosa
7065	Persian	7585	Kurdish	8368	Sindhi	8979	Yoruba
7073	Finnish	7589	Kirghiz	8372	Serbo-Croatian	9072	Chinese
7074	Fiji	7665	Latin	8373	Singhalese	9085	Zulu

Area Code List

Enter the appropriate code number for the initial setting “Area Code” (See page 15).

Code	Area	Code	Area	Code	Area	Code	Area
AD	Andorra	ER	Eritrea	LC	Saint Lucia	SC	Seychelles
AE	United Arab Emirates	ES	Spain	LI	Liechtenstein	SD	Sudan
AF	Afghanistan	ET	Ethiopia	LK	Sri Lanka	SE	Sweden
AG	Antigua and Barbuda	FI	Finland	LR	Liberia	SG	Singapore
AI	Anguilla	FJ	Fiji	LS	Lesotho	SH	Saint Helena
AL	Albania	FK	Falkland Islands	LT	Lithuania	SI	Slovenia
AM	Armenia	FM	Micronesia	LU	Luxembourg	SJ	Svalbard and Jan Mayen Islands
AN	Netherlands Antilles	FO	Faroe Islands	LV	Latvia		
AO	Angola	FR	France	LY	Libya	SK	Slovak Republic
AQ	Antarctica	FX	France (European Territory)	MA	Morocco	SL	Sierra Leone
AR	Argentina			MC	Monaco	SM	San Marino
AS	American Samoa	GA	Gabon	MD	Moldavia	SN	Senegal
AT	Austria	GB	Great Britain	MG	Madagascar	SO	Somalia
AU	Australia	GD	Grenada	MH	Marshall Islands	SR	Suriname
AW	Aruba	GE	Georgia	MK	Macedonia	ST	Saint Tome and Principe
AZ	Azerbaidjan	GF	French Guyana	ML	Mali	SU	Former USSR
BA	Bosnia-Herzegovina	GH	Ghana	MM	Myanmar	SV	El Salvador
BB	Barbados	GI	Gibraltar	MN	Mongolia	SY	Syria
BD	Bangladesh	GL	Greenland	MO	Macau	SZ	Swaziland
BE	Belgium	GM	Gambia	MP	Northern Mariana Islands	TC	Turks and Caicos Islands
BF	Burkina Faso	GN	Guinea	MQ	Martinique (French)	TD	Chad
BG	Bulgaria	GP	Guadeloupe (French)	MR	Mauritania	TF	French Southern Territories
BH	Bahrain	GQ	Equatorial Guinea	MS	Montserrat		
BI	Burundi	GR	Greece	MT	Malta	TG	Togo
BJ	Benin	GS	S. Georgia & S. Sandwich Isls.	MU	Mauritius	TH	Thailand
BM	Bermuda			MV	Maldives	TJ	Tadjikistan
BN	Brunei Darussalam	GT	Guatemala	MW	Malawi	TK	Tokelau
BO	Bolivia	GU	Guam (USA)	MX	Mexico	TM	Turkmenistan
BR	Brazil	GW	Guinea Bissau	MY	Malaysia	TN	Tunisia
BS	Bahamas	GY	Guyana	MZ	Mozambique	TO	Tonga
BT	Bhutan	HK	Hong Kong	NA	Namibia	TP	East Timor
BV	Bouvet Island	HM	Heard and McDonald Islands	NC	New Caledonia (French)	TR	Turkey
BW	Botswana			NE	Niger	TT	Trinidad and Tobago
BY	Belarus	HN	Honduras	NF	Norfolk Island	TV	Tuvalu
BZ	Belize	HR	Croatia	NG	Nigeria	TW	Taiwan
CA	Canada	HT	Haiti	NI	Nicaragua	TZ	Tanzania
CC	Cocos (Keeling) Islands	HU	Hungary	NL	Netherlands	UA	Ukraine
CF	Central African Republic	ID	Indonesia	NO	Norway	UG	Uganda
CG	Congo	IE	Ireland	NP	Nepal	UK	United Kingdom
CH	Switzerland	IL	Israel	NR	Nauru	UM	USA Minor Outlying Islands
CI	Ivory Coast	IN	India	NU	Niue		
CK	Cook Islands	IO	British Indian Ocean Territory	NZ	New Zealand	US	United States
CL	Chile			OM	Oman	UY	Uruguay
CM	Cameroon	IQ	Iraq	PA	Panama	UZ	Uzbekistan
CN	China	IR	Iran	PE	Peru	VA	Vatican City State
CO	Colombia	IS	Iceland	PF	Polynesia (French)	VC	Saint Vincent & Grenadines
CR	Costa Rica	IT	Italy	PG	Papua New Guinea		
CS	Former Czechoslovakia	JM	Jamaica	PH	Philippines	VE	Venezuela
CU	Cuba	JO	Jordan	PK	Pakistan	VG	Virgin Islands (British)
CV	Cape Verde	JP	Japan	PL	Poland	VI	Virgin Islands (USA)
CX	Christmas Island	KE	Kenya	PM	Saint Pierre and Miquelon	VN	Vietnam
CY	Cyprus	KG	Kyrgyzstan	PN	Pitcairn Island	VU	Vanuatu
CZ	Czech Republic	KH	Cambodia6	PR	Puerto Rico	WF	Wallis and Futuna Islands
DE	Germany	KI	Kiribati	PT	Portugal	WS	Samoa
DJ	Djibouti	KM	Comoros	PW	Palau	YE	Yemen
DK	Denmark	KN	Saint Kitts & Nevis Anguilla	PY	Paraguay	YT	Mayotte
DM	Dominica	KP	North Korea	QA	Qatar	YU	Yugoslavia
DO	Dominican Republic	KR	South Korea	RE	Reunion (French)	ZA	South Africa
DZ	Algeria	KW	Kuwait	RO	Romania	ZM	Zambia
EC	Ecuador	KY	Cayman Islands	RU	Russian Federation	ZR	Zaire
EE	Estonia	KZ	Kazakhstan	RW	Rwanda	ZW	Zimbabwe
EG	Egypt	LA	Laos	SA	Saudi Arabia		
EH	Western Sahara	LB	Lebanon	SB	Solomon Islands		

Specifications

General

Power requirements	AC 120V , 60 Hz
Power consumption	14W
Dimensions (approx.)	430 X 118 X 408 mm (16.9 x 4.7 x 16.1 inches) (w x h x d)
Mass (approx.)	5.7 kg (12.6 lbs)
Operating temperature	5˚C to 40˚C (41˚F to 104˚F)
Operating humidity	5 % to 90 %

System

Laser	Semiconductor laser, wavelength 650 nm
Signal system	NTSC
Frequency response	DVD (PCM 96 kHz): 8 Hz to 44 kHz DVD (PCM 48 kHz): 8 Hz to 22 kHz CD: 8 Hz to 20 kHz
Signal-to-noise ratio	More than 100dB (ANALOG OUT connectors only)
Harmonic distortion	Less than 0.008%
Dynamic range	More than 100 dB (DVD) More than 95 dB (CD)

Outputs

VIDEO OUT	1 Vp-p 75 ohms, sync negative, RCA jack x 1
S-VIDEO OUT	(Y) 1.0 V (p-p), 75 Ω, negative sync., Mini DIN 4-pin x 1 (C) 0.3 V (p-p) 75 ohms
COMPONENT VIDEO OUT	(Y) 1.0 V (p-p), 75 Ω, negative sync., RCA jack x 1 (P_B)/(P_R) 0.7 V (p-p), 75 Ω, RCA jack x 2
Audio output (digital audio)	0.5 V (p-p), 75 Ω, RCA jack x 1
Audio output (optical audio)	5 V (p-p), 75 Ω, Optical connector x 1
Audio output (analog audio)	2.0 Vrms (1 KHz, 0 dB), 330 Ω, RCA jack (L, R) x 2

Accessory

Video cable 1
Audio cable 1
Remote control 1
Batteries 2

- Design and specifications are subject to change without notice.

Manufactured under license from Dolby Laboratories. “Dolby”, and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. Copyright 1992-1997 Dolby Laboratories. All rights reserved.

“DTS” and “DTS Digital Out” are trademarks of Digital Theater Systems, Inc.

LIMITED WARRANTY DVD VIDEO PLAYER

Toshiba America Consumer Products, Inc. (“TACP”), Toshiba Hawaii (“THI”) and Toshiba Canada Limited (“TCL”) make the following limited warranties. These limited warranties extend to original purchaser or any person receiving this set as a gift from the original purchaser and to no other purchaser or transferee.

Limited Ninety (90) Day Warranty
TACP/THI warrant this product against defects in materials or workmanship for a period of ninety (90) days after the date of original retail purchase. During this period, TACP/ THI will repair or replace a defective product or part, at their option, with a new or refurbished product or part without charge to you. You must deliver the entire product to a TACP/THI Authorized Service Station. You are responsible for all transportation and insurance charges for the unit to and from the Authorized Service Station. If you live in the U.S.A. you may, at your option, return your DVD Unit to:

Toshiba America Consumer Products Inc.
Returns Center
1420C Toshiba Dr.
Lebanon, TN 37087

Upon receipt we will, at our option, exchange the DVD Unit with a new or refurbished unit. **Canadian consumers are requested to contact TCL. In Hawaii consumers are requested to contact THI.**

Limited One (1) Year Warranty
TACP/THI further warrant the parts in this product against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP/THI will repair or replace a defective product or part, at their option, with a new or refurbished product or part without charge to you, except that if a defective part is replaced after ninety (90) days from the date of the original retail purchase you pay labor charges involved in the replacement. You must also deliver the entire product to a TACP/THI Authorized Service Station. You are responsible for all transportation and insurance charges for the unit to and from the Authorized Service Station. If you live in the U.S.A. you may, at your option, return your DVD Unit to:

Toshiba America Consumer Products Inc.
Returns Center
1420C Toshiba Dr.
Lebanon, TN 37087

Upon receipt we will, at our option, exchange the DVD Unit with a new or refurbished unit. **Canadian Consumers are requested to contact TCL. In Hawaii consumers are requested to contact THI.**

Rental Units
The warranty for rental units begin with the first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

Commercial Units
Products sold and used for commercial use have a limited ninety (90) day warranty for all parts and labor.

Owner’s Manual
You should read the owner’s manual thoroughly before operating this product. You should complete and mail the enclosed Demographic card within ten (10) days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP to provide you with better customer service and improved products. Failure to return the card will not affect your rights under this warranty.

Your Responsibility
The above warranties are subject to the following conditions:
(1) You must retain your bill of sale or provide other proof of purchase.
(2) You must notify a TACP/THI/TCL /Authorized Service Station within thirty (30) days after you discover a defective product or part.
(3) All warranty servicing of this product must be made by a TACP/THI/TCL Authorized Service Station.
(4) U.S.A. warranties are effective only if the product is purchased and operated in the Continental U.S.A. or Puerto Rico.
(5) Labor service charges for set installation. Set up, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
(6) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, damage caused by Acts of God, such as lighting or fluctuations in electric power, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have been altered or modified without authorization of TACP/THI/TCL or to damage to products or part thereof which have had the serial number removed, altered, defaced or rendered illegible.
(7) Should you elect to return your DVD Unit to TACP after the ninety (90) days and within one (1) year, or after the warranty period has expired: Call (800)-631-3811 to receive information concerning an exchange price. Payment must be enclosed with product in the form of a certified check or money order including reason for return.
(8) Physically damaged DVD Units are not acceptable for repair or exchange whether in or out of warranty and will be returned as received.

(Continued)

LIMITED WARRANTY DVD VIDEO PLAYER (Continued)

How to Obtain Warranty Service

(1) Refer to the troubleshooting guide in your owner's manual. This check list may solve your problem.
(2) In the U.S.A., only call the TACP toll free number 800-631-3811, or if in Hawaii or Canada see listing below within (30) days after you find a defective product or part.
(3) Arrange for the delivery of the product to the TACP/THI/TCL Authorized Service Station or TACP Return Center. Products shipped to the Service Station must be insured and safely and securely packed, preferably in the original shipping carton, and a letter explaining the defect and also a copy of the bill of sale or other proof of purchase must be enclosed.

In the Continental United States contact:

In Hawaii contact:
Toshiba Hawaii Inc.
327 Kamakee Street
Honolulu, HA 96814
(808)-521-5377

In Canada contact:
Consumer Electronics Group
191 McNabb Street
Markham, Ontario L3R 8H2
(905)-470-5400

Consumer Electronics Group
22171 Fraserwood Way
Richmond, B.C. V6W 1J5
(604)-303-2500

Consumer Electronics Group
1643 North Service Road
Droval, QC H9P 1J1
(514)-856-4100

All warranties implied by state law, including the implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of the limited warranties set forth above. With the exception of any warranties implied by state law as hereby limited, the foregoing warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or seller with respect to the repair or replacement of any parts. In no event shall TACP/THI be liable for consequential or incidental damages.
No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP/THI arising under the warranty or under any statute, or law of the United States or any state thereof, is hereby limited to ninety (90) days from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.
This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Some states do not allow limitation on how long an implied warranty lasts, when an action may be brought, or the exclusion or limitation of incidental or consequential damages, so the above provisions may not apply to you.

ATTENTION CANADIAN CONSUMERS:
Canadian consumers are requested to complete the special Canadian "Warranty Registration Form" enclosed, and forward this completed form with a copy of bill of sale to TOSHIBA OF CANADA to "Register and Validate" their warranty. Product must be purchased from an Authorized Canadian Dealer. Products purchased in the U.S.A. and used in Canada are not covered by these warranties.

IMPORTANT: PACKING AND SHIPPING INSTRUCTION
When you send the product to a Service Station, you must use the original carton box and packing material, then insert the original carton box containing the unit into another carton using more packing material.

Safety Precautions

WARNING
RISK OF ELECTRIC SHOCK DO NOT OPEN

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR ÉVITER LES CHOC ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER

CAUTION:

This Digital Video Disc Player employs a Laser System.

To ensure proper use of this product, please read this owner's manual carefully and retain for future reference, should the unit require maintenance, contact an authorized service location-see service procedure.

Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

CAUTION: The apparatus shall not be exposed to water, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

FCC WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

REGULATORY INFORMATION: FCC Part 15

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a residential installation. This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the product and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notes on copyrights:

It is forbidden by law to copy, broadcast, show, broadcast via cable, play in public, or rent copyright material without permission.

This product features the copy protection function developed by Macrovision. Copy protection signals are recorded on some discs. When recording these discs on a VCR, picture noise will appear during playback.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

SERIAL NUMBER: The serial number is found on the back of this unit. This number is unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase.

Model No. _____

Serial No. _____

IMPORTANT SAFETY INSTRUCTIONS

CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS OWNER'S MANUAL AND THOSE MARKED ON THE UNIT. RETAIN THIS BOOKLET FOR FUTURE REFERENCE.

This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use, and servicing.

This unit does not contain any parts that can be repaired by the user.

DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

1. **Read These Instructions**
   All safety and operating instructions should be read before the product is operated.
2. **Follow All Instructions**
   All operating and use instructions should be followed.
3. **Keep These Instructions**
   The safety and operating instructions should be retained for future reference.
4. **Heed All Warnings**
   All warnings on the product and in the operating instructions should be adhered to.
5. **Power Sources**
   This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply in your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Grounding or Polarization**
   Do not defeat the safety purpose of the polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
7. **Ventilation**
   Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
8. **Heat**
   Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. **Water and Moisture**
   Do not use this apparatus near water. For example: near a bath tub, wash bowl, kitchen sink, Laundry tub, in a wet basement; or near a swimming pool.
10. **Cleaning**
    Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Clean only with dry cloth.
11. **Power-Cord Protection**
    Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
12. **Overloading**
    Do not overload wall outlets, extension cords, or integral convenience receptacles, this can result in a risk of fire or electric shock.
13. **Lightning**
    Unplug this apparatus apparatus during lightning storms or when unused for long periods of time. This will prevent damage to the product due to lightning and power-line surges.
14. **Object and Liquid Entry**
    Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
15. **Attachments**
    Only use attachments/accessories specified by the manufacturer.
16. **Accessories**
    Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

    PORTABLE CART WARNING
17. **Disc Tray**
    Keep your fingers well clear of the disc tray as it is closing. It can cause personal injury.
18. **Burden**
    Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.
19. **Connecting**
    When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.
20. **Sound Volume**
    Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.
21. **Sound Distortion**
    Do not allow the product to output distorted sound for a longtime. It may cause speaker overheating and fire.
22. **Earphone**
    When you use the earphone, keep the volume at a moderate level. If you use the earphone continuously with high volume sound, it may cause hearing damage.
23. **Laser Beam**
    Do not look into the opening of the disc tray or ventilation opening of the product to see the source of the laser beam. It may cause sight damage.
24. **Disc**
    Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.
25. **Damage Requiring Service**
    Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normal, or has been dropped.
26. **Servicing**
    Do not attempt to service this product yourself as opening or removing the cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
27. **Replacement parts**
    When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
28. **Safety Check**
    Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Table of Contents

Introduction

Safety Precautions 2
IMPORTANT SAFETY INSTRUCTIONS 3
Table of Contents 4
Before Use 5-6
Playable Discs 5
Precautions 6
Notes on Discs 6
About Symbols 6
Front Panel and Display 7
Remote Control 8
Rear Panel 9

Preparation

Connections 10-11
Connecting to a TV 10
Connecting to Optional Equipment 11
Before Operation 12-15
General Explanation 12
On-Screen Display 12
Initial Settings 13-15
• Initial Settings General Operation 13
• Language 13
• Picture 13
• Sound 14
• Others 14
• Parental Control 15

Operation

Operation with DVD and Video CD 16-18
Playing a DVD and Video CD 16
• Exchanging discs during playback 16
• Skipping discs 16
• Exchanging the disc and starting playback . . 16
General Features 17
• Moving to another TITLE 17
• Moving to another CHAPTER/TRACK 17
• Slow Motion 17
• Still Picture and Frame-by-Frame Playback . . 17
• Search 17
• Random 17
• Repeat 18
• Repeat A-B 18
• Time Search 18
• Selecting the sound enhancement 18
• Zoom 18
• Marker Search 19
Special DVD Features 19
• Title Menu 19
• Disc Menu 19
• Camera Angle 19
• Changing the Audio Language 19
• Changing the Audio Channel 19
• Subtitles 19
Operation with Audio CD and MP3 Disc 20
Playing an Audio CD and MP3 Disc 20
• Pause 20
• Moving to another Track 20
• Repeat Track/All/Off 20
• Search 20
• Random 20
• Repeat A-B 20
• 3D Surround 20
• Changing the Audio Channel 20
Programmed Playback 21
Programmed Playback with Audio CD and MP3 Disc 21
Programmed Playback with Video CD 21
• Repeat Programmed Tracks 21
• Erasing a Track from Program List 21
• Erasing the Complete Program List 21
Additional Information 22
Last Condition Memory 22
Screen Saver 22
Video Mode Setting 22
Dimmer Function 22
Notes on MP3 Discs 22

Reference

Troubleshooting 23
Language Code List 24
Area Code List 25
Specifications 26

Others

LIMITED WARRANTY DVD VIDEO PLAYER . . . 27-28

About the symbols for instructions

⚠ Indicates hazards likely to cause harm to the unit itself or other material damage.

Indicates special operating features of this unit.

Indicates tips and hints for making the task easier.

Before Use

Playable Discs

DVD VIDEO	DVD Video (8 cm / 12 cm disc)
COMPACT disc DIGITAL VIDEO	Video CD (VCD) (8 cm / 12 cm disc)
COMPACT disc DIGITAL AUDIO	Audio CD (8 cm / 12 cm disc)

In addition, this unit can play a CD-R or CD-RW that contains audio titles or MP3 files.

Notes
– Depending on the conditions of the recording equipment or the CD-R/RW disc itself, some CD-R/RW discs cannot be played on the unit.
– The unit cannot play the CD-R/RW discs that do not contain any data, or contain different kinds of formatted data other than MP3 and CD-DA data.
– Do not attach any seal or label to either side (the labeled side or the recorded side) of a disc.
– Do not use irregularly shaped CDs (e.g., heart-shaped or octagonal). It may result in malfunctions.

Notes on DVDs and Video CDs
Some playback operations of DVDs and Video CDs may be intentionally fixed by software manufacturers. As this unit plays DVDs and Video CDs according to disc content designed by the software manufacturer, some playback features of the unit may not be available, or other functions may be added.
Refer also to the instructions supplied with the DVDs and Video CDs. Some DVDs made for business purposes may not be playable on this unit.

Regional code of the DVD player and DVDs
This DVD player is designed and manufactured for playback of region "1" encoded DVD software. The region code on the labels of some DVD discs indicates which type of player can play those discs. This unit can play only DVD discs labeled "1" or "ALL". If you try to play any other discs, the message "Check Regional Code" will appear on the TV screen. Some DVD discs may not have a region code label even though their playback is prohibited by area limits.

Note on DTS-encoded CDs
To avoid possible damage to the audio system, turn down the volume before playing back such discs. Adjust the volume gradually to personal preference. To enjoy DTS Digital Surround™ playback, an external 5.1 channel DTS Digital Surround™ decoder system must be connected to the digital output of the player.

Disc-related terms

Title (DVD only)
The main film content or accompanying feature content or additional feature content, or music album.
Each title is assigned a title reference number enabling you to locate it easily.

Chapter (DVD only)
Sections of a picture or a musical piece that are smaller than titles.
A title is composed of one or several chapters. Each chapter is assigned a chapter number, enabling you to locate the chapter you want. Chapter numbers may not be recorded on all discs.

Track (Video CD and audio CD only)
Sections of a picture or a musical piece on a video CD or an audio CD. Each track is assigned a track number, enabling you to locate the track you want.

Scene
On a video CD with PBC (Playback control) functions, moving pictures and still pictures are divided into sections called "Scenes". Each scene is displayed in the menu screen and assigned a scene number, enabling you to locate the scene you want.
A scene is composed of one or several tracks.

Types of video CDs

There are two types of video CDs:

Video CDs equipped with PBC (Version 2.0)
PBC (Playback control) functions allow you to interact with the system via menus, search functions, or other typical computer-like operations. Moreover, still pictures of high resolution can be played if they are included in the disc.

Video CDs not equipped with PBC (Version 1.1)
Operated in the same way as audio CDs, these discs allow playback of video pictures as well as sound, but they are not equipped with PBC.

Precautions

Handling the unit

When shipping the unit
The original shipping carton and packing materials come in handy. For maximum protection, re-pack the unit as it was originally packed at the factory.

When setting up the unit
The picture and sound of a nearby TV, VCR, or radio may be distorted during playback. In this case, position the unit away from the TV, VCR, or radio, and turn off the unit after removing the disc.

To keep the exterior surfaces clean
Do not use volatile liquids, such as insecticide spray, near the unit. Do not allow rubber or plastic products to contact the unit for a long period of time. They will leave marks on the surface.

To move the unit
When you move the player, take out any discs. If you don't, the discs may be damaged or be dropped to the internal of the DVD player.

Cleaning the unit

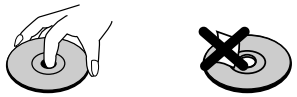
To clean the cabinet
Use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents, such as alcohol, benzine, or thinner, as these might damage the surface of the unit.

To obtain a clear picture
The DVD player is a high-tech, precision device. If the optical pick-up lens and disc drive parts are dirty or worn down, the picture quality will be poor.
Regular inspection and maintenance are recommended after every 1,000 hours of use. (This depends on the operating environment.)
For details, please contact your nearest dealer.

Notes on Discs

Handling discs

Do not touch the playback side of the disc.
Hold the disc by the edges so that fingerprints will not get on the surface.
Do not stick paper or tape on the disc.

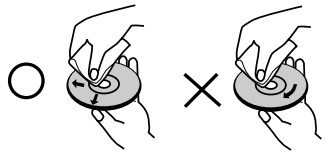


Storing discs

After playing, store the disc in its case.
Do not expose the disc to direct sunlight or sources of heat, or leave it in a parked car exposed to direct sunlight, as there may be a considerable temperature increase inside the car.

Cleaning discs

Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the center out.



Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.

About Symbols

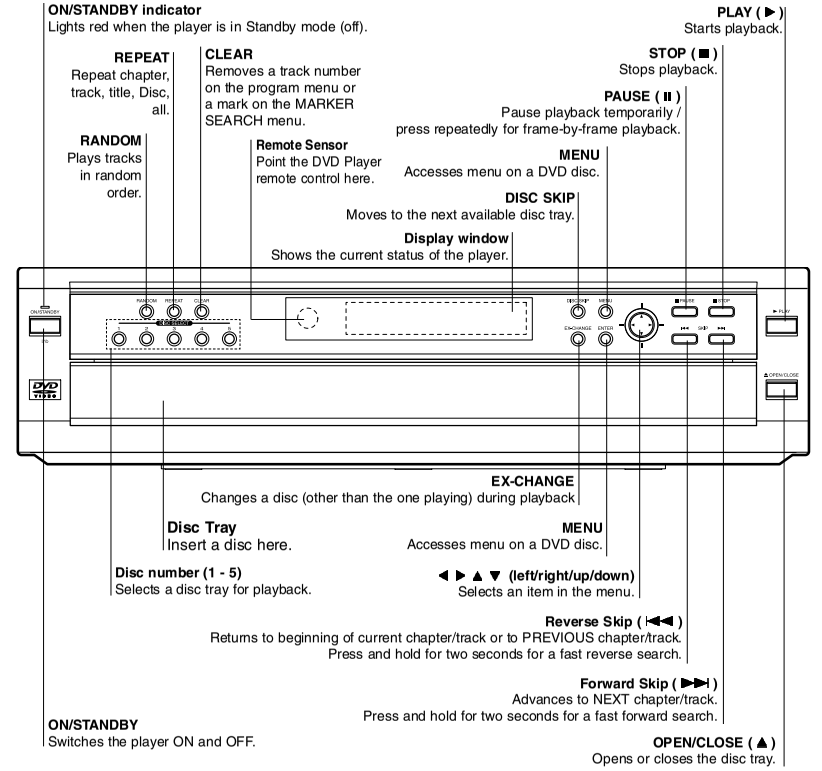
About the ⃠ symbol display

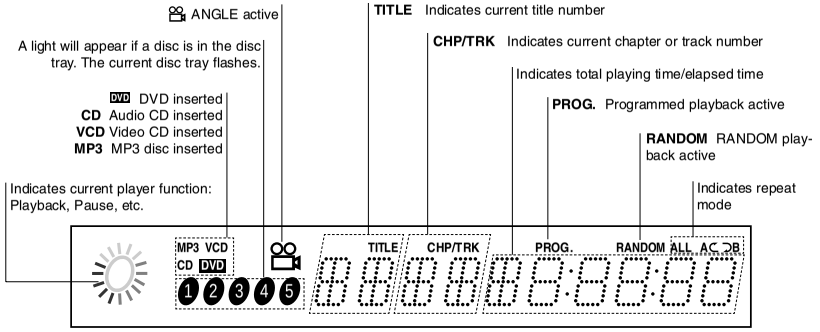
" ⃠ " may appear on the TV screen during operation. This icon means the function explained in this owner's manual is not available on that specific DVD video disc.

About the disc symbols for instructions

A section whose title has one of the following symbol is applicable only to the disc represented by the symbol.

- DVD — DVD
- VCD2.0 — Video CDs with the PBC (playback control) function.
- VCD1.1 — Video CDs without the PBC (playback control) function.
- CD — Audio CDs.
- MP3 — MP3 disc.


ON/STANDBY indicator
Lights red when the player is in Standby mode (off).
PLAY (▶)
Starts playback.
REPEAT
Repeat chapter, track, title, Disc, all.
CLEAR
Removes a track number on the program menu or a mark on the MARKER SEARCH menu.
STOP (■)
Stops playback.
PAUSE (⏸)
Pause playback temporarily / press repeatedly for frame-by-frame playback.
RANDOM
Plays tracks in random order.
Remote Sensor
Point the DVD Player remote control here.
MENU
Accesses menu on a DVD disc.
DISC SKIP
Moves to the next available disc tray.
Display window
Shows the current status of the player.
EX-CHANGE
Changes a disc (other than the one playing) during playback
Disc Tray
Insert a disc here.
MENU
Accesses menu on a DVD disc.
Disc number (1 - 5)
Selects a disc tray for playback.
◀ ▶ ▲ ▼ (left/right/up/down)
Selects an item in the menu.
Reverse Skip (⏮)
Returns to beginning of current chapter/track or to PREVIOUS chapter/track.
Press and hold for two seconds for a fast reverse search.
Forward Skip (⏭)
Advances to NEXT chapter/track.
Press and hold for two seconds for a fast forward search.
ON/STANDBY
Switches the player ON and OFF.
OPEN/CLOSE (▲)
Opens or closes the disc tray.


ANGLE active
A light will appear if a disc is in the disc tray. The current disc tray flashes.
DVD DVD inserted
CD Audio CD inserted
VCD Video CD inserted
MP3 MP3 disc inserted
Indicates current player function: Playback, Pause, etc.
TITLE Indicates current title number
CHP/TRK Indicates current chapter or track number
Indicates total playing time/elapsed time
PROG. Programmed playback active
RANDOM RANDOM playback active
Indicates repeat mode
MP3 VCD
CD DVD
TITLE
CHP/TRK
PROG.
RANDOM ALL
1 2 3 4 5

Remote Control

OPEN/CLOSE
Opens and closes the disc tray.

GUI DISPLAY
Accesses on-screen display

SETUP
Accesses or removes setup menu.

TOP MENU
Displays the Title menu of the disc if available.

◄ ► ▲ ▼ (left/right/up/down)
Selects an item in the menu.

CLEAR
Removes a track number on the program menu or a mark on the MARKER SEARCH menu.

PAUSE/STEP (❚❚ / ❚►) •
Pauses playback temporarily / press repeatedly for frame-by-frame playback.

STOP (■) •
Stops playback.

Forward SKIP (►►❙) •
Advances to next chapter or track.

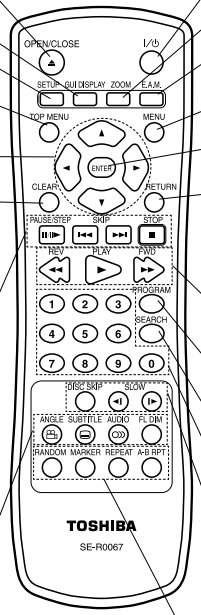
Reverse SKIP (❙◄◄) •
Returns to beginning of current chapter or track or go to previous chapter or track.

ANGLE •
Selects a DVD camera angle if available

SUBTITLE •
Selects a subtitle language.

AUDIO •
Selects an audio language (DVD) or an audio channel (CD).

FL DIM •
Controls the Display Window's light.



POWER
Switches DVD Player ON and OFF.

ZOOM
Enlarges video image.

E.A.M.
Select sound mode during disc playback.

MENU
Accesses menu on a DVD disc.

ENTER
Acknowledges menu selection.

RETURN
- Removes the setup menu.
- Displays the menu of a video CD with PBC.

• Reverse SCAN (◄◄)
Search backward.

• PLAY (►)
Starts playback.

• Forward SCAN (►►)
Search forward.

PROGRAM
Accesses or removes Program menu.

SEARCH
Displays MARKER SEARCH menu.

0-9 number buttons
Selects numbered items in a menu.

• Reverse SLOW (◄)
Reverse slow playback.

• Forward SLOW (►)
Forward slow playback.

• DISC SKIP
Moves to the next available disc tray.

• RANDOM
Plays tracks in random order.

• MARKER
Marks any point during playback.

• REPEAT
Repeat chapter, track, title, all.

• A-B RPT
Repeat sequence.

Remote Control Operation Range

Point the remote control at the remote sensor and press the buttons.

- **Distance:** About 23 ft (7 m) from the front of the remote sensor
- **Angle:** About 30° in each direction of the front of the remote sensor

Remote control battery installation

Detach the battery cover on the rear of the remote control, and insert two R03 (size AAA) batteries with ⊕ and ⊖ aligned correctly.

⚠ Caution
Do not mix old and new batteries. Never mix different types of batteries (standard, alkaline, etc.).

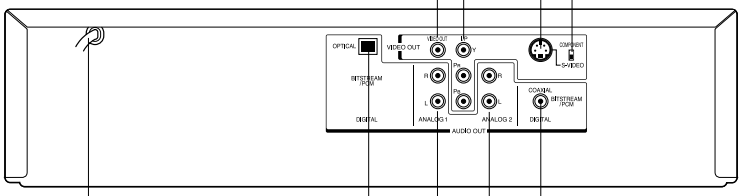
Rear Panel

VIDEO OUTPUT Switch
Select either S-VIDEO or COMPONENT, depending on how you connected the DVD Player to the TV.

S-VIDEO OUT
Connect to a TV with S-Video inputs.

COMPONENT/PROGRESSIVE SCAN VIDEO OUT (Y PB PR)
Connect to a TV with Y PB PR inputs.

VIDEO OUT
Connect to a TV with video inputs.



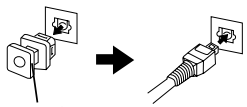
AC Power Cord
Plug into the power source.

OPTICAL (Digital audio out jack)
Connect to digital (optical) audio equipment.

ANALOG AUDIO OUT (Left/Right) 1, 2
Connect to an amplifier, receiver or stereo system.

COAXIAL (Digital audio out jack)
Connect to digital (coaxial) audio equipment.

Dust protection cap
Remove the dust protection cap from the OPTICAL DIGITAL OUT jack and connect the optical digital cable (not supplied) securely so that the configurations of both the cable and the connector match. Keep the dust protection cap and always reattach the cap when not using the connector to protect against dust intrusion.



Dust protection cap

⚠
Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

Tips
- Depending on your TV and other equipment you wish to connect, there are various ways you could connect the player. Use only one of the connections described below.
- Please refer to the manuals of your TV, VCR, Stereo System or other devices as necessary to make the best connections.
- For better sound reproduction, connect the player's AUDIO OUT jacks to the audio in jacks of your amplifier, receiver, stereo or audio/video equipment. See "Connecting to optional equipment" on page 11.

Caution
– Make sure the DVD Player is connected directly to the TV. Tune the TV to the corresponding video input.
– Do not connect the DVD Player's AUDIO OUT jack to the phono in jack (record deck) of your audio system.
– Do not connect your DVD Player via your VCR. The DVD image could be distorted by the copy protection system.

Connecting to a TV

- Make one of the following connections, depending on the capabilities of your existing equipment.
- When using the COMPONENT VIDEO OUT/ PROGRESSIVE SCAN jacks, set the VIDEO OUTPUT switch to COMPONENT. When using the S-VIDEO OUT jack, set the VIDEO OUTPUT switch to S-VIDEO.

Video connection

1 Connect the VIDEO OUT jack on the DVD Player to the video in jack on the TV using the video cable supplied **(V)**.

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV **(A)** using the supplied audio cables.

S-Video connection

1 Connect the S-VIDEO OUT jack on the DVD Player to the S-Video in jack on the TV using the optional S-Video cable **(S)**.

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV **(A)** using the supplied audio cables.

Component Video (Color Stream®) connection

1 Connect the COMPONENT VIDEO OUT/ PROGRESSIVE SCAN jacks on the DVD Player to the corresponding in jacks on the TV using an optional Y PB PR cable **(C)**.

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV **(A)** using the supplied audio cables.

Progressive Scan (ColorStream® pro) connection

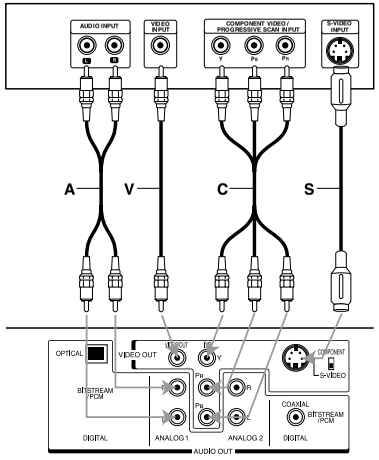
- If your television is a high-definition or "digital ready" television, you may take advantage of the DVD Player's progressive scan output for the highest video resolution possible.
- If your TV does not accept the Progressive Scan format, the picture will appear scrambled if you select Progressive Scan output from the DVD Player.

1 Connect the COMPONENT VIDEO OUT/ PROGRESSIVE SCAN jacks on the DVD Player to the corresponding in jacks on the TV using an optional Y PB PR cable **(C)**.

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV **(A)** using the supplied audio cables.

Notes
– Set the Progressive to "On" from the setup menu, see page 13.
– Progressive scan does not function with the analog video connections (yellow VIDEO OUT jack).

Rear of TV



Rear of DVD player

Connecting to Optional Equipment

Connecting to an amplifier equipped with two channel analog stereo or Dolby Surround

Connect the Left and Right AUDIO OUT jacks on the DVD Player to the audio left and right in jacks on your amplifier, receiver or stereo system, using the supplied audio cables **(A)**.

Connecting to an amplifier equipped with two channel digital stereo (PCM) or to an Audio/ Video receiver equipped with a multi-channel decoder (Dolby Digital™, MPEG 2 or DTS)

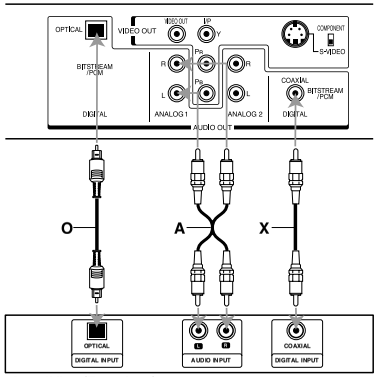
1 Connect one of the DVD Player's DIGITAL AUDIO OUT jacks (OPTICAL **O** or COAXIAL **X**) to the corresponding in jack on your amplifier. Use an optional digital (optical **O** or coaxial **X**) audio cable.

2 You will need to activate the player's digital output. (See "Digital Audio Output" on page 14).

Digital Multi-channel sound
A digital multi-channel connection provides the best sound quality. For this you need a multi-channel Audio/Video receiver that supports one or more of the audio formats supported by your DVD Player (MPEG 2, Dolby Digital and DTS). Check the receiver manual and the logos on the front of the receiver.

Notes
– If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, distorted sound or no sound at all.
– Six Channel Digital Surround Sound via digital connection can only be obtained if your receiver is equipped with a Digital Multi-channel decoder.
– To confirm the audio format of the current DVD selection display, press AUDIO.
– Repeated pressing of the AUDIO button may allow you to select between various audio formats available on the disc.

Rear of DVD player



Amplifier (Receiver)

Note
This player does not perform internal (2 channel) decoding of a DTS sound track. To enjoy DTS multi channel surround, you must connect this player to a DTS compatible receiver via one of this player's digital audio outputs.

PREPARATION

General Explanation

This manual gives basic instructions for operating the DVD Player. Some DVDs require specific operation or allow only limited operation during playback. When this occurs, the symbol ⃠ appears on the TV screen, indicating that the operation is not permitted by the DVD Player or is not available on the disc.

On-Screen Display

General playback status can be displayed on the TV screen. Some items can be changed on the menu.

On-screen display operation

1 **Press GUI DISPLAY during playback.**

2 **Press ▲ or ▼ to select an item.**
The selected item will be highlighted.

3 **Press ◀ or ▶ to change the setting of an item.**
The number buttons can be also be used for setting numbers (e.g., title number). For some functions, press ENTER to execute the setting.

Repeat mode Icons

- Repeat Title
- Repeat Chapter
- Repeat Track (non-PBC Video CDs only)
- Repeat All Tracks (non-PBC Video CDs only)
- Repeat A-B
- Repeat Off
- Resume play from this point
- ⃠ Action prohibited or not available

Notes
- Some discs may not provide all of the features on the on-screen display example shown below.
- If no button is pressed for 10 seconds, the on-screen display disappears.

DVD

Items		Function (Press ▲/▼ to select desired item)	Selection Method
Title Number	1/3	**Shows the current title number and total number of available titles, and** skips to the desired title number.	◀ / ▶, or Numbers, ENTER
Chapter Number	1/12	**Shows the current chapter number and total number of available chapters, and** skips to the desired chapter number.	◀ / ▶, or Numbers, ENTER
Time search	0:16:57	**Shows the elapsed playing time, and** searches a point by elapsed time method.	Numbers, ENTER
Audio language and Digital Audio Output mode	1 ENG DD 6 CH	**Shows the current audio soundtrack language, encoding method and channel number, and** changes you make to the setting.	◀ / ▶
Subtitle language	OFF	**Shows the current subtitles language, and** changes you make to the setting.	◀ / ▶
Angle	1/1	**Shows the current angle number and total number of angles, and** changes you make to the angle number.	◀ / ▶
Sound	NORM.	**Shows the current sound mode, and** changes you make to the setting.	◀ / ▶

VCD2.0 VCD1.1

Items		Function (Press ▲/▼ to select desired item)	Selection Method
Track Number	1/4	**Shows the current track number, total number of tracks and PBC On mode, and** skips to the desired track number.	◀ / ▶, or Numbers, ENTER
Time	0:16:57	**Shows the elapsed playing time (Display only)**	–
Audio Channel	STER.	**Shows the audio channel, and** changes you make to the audio channel.	◀ / ▶
Sound	NORM.	**Shows the current sound mode, and** changes you make to the setting.	◀ / ▶

Initial Settings

You can set your own Personal Preferences on the player.

Initial Settings General Operation

1 **Press SETUP.**
The setup menu appears.

2 **Press ▲/▼ to select the desired item.**
The screen will show the current setting for the selected item, as well as alternate setting(s).

3 **While the desired item is selected, press ▶, then ▲/▼ to select the desired setting.**

4 **Press ENTER to confirm your selection.**
Some items require additional steps.

5 **Press SETUP, RETURN or PLAY to exit the setup menu.**

Language

Disc Language DVD

Select a language for the disc's Menu, Audio and Subtitle.
Original : The original language set for the disc is selected.
Other : To select another language, press number buttons to enter the corresponding 4-digit number according to the language code list on page 24. If you enter the wrong language code, press CLEAR.

Menu Language

Select a language for the setup menu. This is the menu you see when you press SETUP.

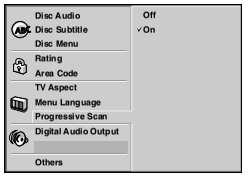
Picture

TV Aspect DVD

4:3 Letterbox: Select when a standard 4:3 TV is connected. Displays theatrical images with masking bars above and below the picture.
4:3 Panscan: Select when a standard 4:3 TV is connected. Displays pictures cropped to fill your TV screen. Both side of the original picture may be cut off.
16:9 Wide: Select when a 16:9 wide TV is connected.

Progressive Scan DVD

Progressive Scan Video provides the highest quality pictures with less flicker and line structure.
If you are using the COMPONENT VIDEO OUT/ PROGRESSIVE SCAN jacks, but are connecting the DVD Player to a standard (analog) television, set Progressive Scan to Off.
If you are using the Component Video jacks for connection to a TV or monitor that is compatible with a progressive scan signal, set Progressive Scan to On.



Notes
– Progressive Scan only works when the VIDEO OUTPUT switch on the rear panel is set to COMPONENT/PROGRESSIVE SCAN.

⚠Caution
Once the setting for progressive scan output is entered, an image will only be visible on a progressive scan compatible TV or monitor. If you set Progressive Scan to On in error, you must reset the unit. Pointing the remote at the player, press the STOP key to stop any disc that is playing. Next, press the STOP key again and hold it for five seconds before releasing it. The video output will be restored to the standard setting, and a picture will once again be visible on a conventional analog TV or monitor.

Sound

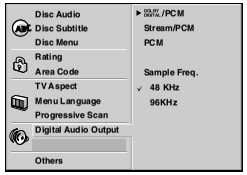
Digital Audio Output

Each DVD disc has a variety of audio output options. Set the player's Digital Audio Output according to the type of audio system you use.

DOLBY DIGITAL/PCM: Select "DOLBY DIGITAL/PCM" if you connected the DVD Player's DIGITAL OUT jack to a Dolby Digital decoder (or an amplifier or other equipment with a Dolby Digital decoder).

Stream/PCM: Select "Stream/PCM" if you connected the DVD Player's DIGITAL OUT jack to an amplifier or other equipment with a DTS decoder, Dolby Digital decoder or MPEG decoder.

PCM: Select when connected to a 2 channel digital stereo amplifier. The DVD player outputs sounds in the PCM 2ch format when you play a DVD video disc recorded on the Dolby Digital, MPEG1 or MPEG2 recording system.



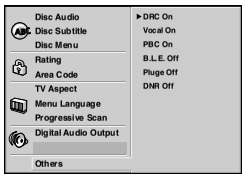
Sample Frequency

To change the Sample Frequency setting, first select the desired Digital Audio Output as indicated as above. If your receiver or amplifier is NOT capable of handling 96KHz signals, select 48KHz. When this choice is made, this unit will automatically convert any 96KHz signals to 48KHz so your system can decode them. If your receiver or amplifier is capable of handling 96KHz signals, select 96KHz. When this choice is made, this unit will pass all signals through without processing.

Others

The DRC, Vocal, PBC, B.L.E., Pluge and DNR settings can be changed.

- Press ▲/▼ to select the desired item and press ENTER. The setting of the selected item alternates between On and Off.



Dynamic Range Control (DRC)

With the DVD format, you can hear a program's soundtrack in the most accurate and realistic presentation possible, thanks to digital audio technology. However, you may wish to compress the dynamic range of the audio output (the difference between the loudest sounds and the quietest ones). Then, you may listen to a movie at a lower volume without losing clarity of sound. Set DRC to On for this effect.

Vocal

Set Vocal to On only when a multi-channel karaoke DVD is playing. The karaoke channels on the disc will mix into normal stereo sound.

PBC

Set Playback Control (PBC) to On or Off.
On: Video CDs with PBC are played according to the PBC.
Off: Video CDs with PBC are played the same way as Audio CDs.

B.L.E. (Black Level Expansion)

To select the black level of playback pictures. Set your preference and monitor's ability.
On: Expanded grey scale. (0 IRE cut off)
Off: Standard grey scale. (7.5 IRE cut off)

Pluge (Blacker than Black)

For proper adjustment of your television brightness settings utilizing a commercially available test disc.
On: Select when you adjust the level of your TV using a commercially available test disc that contains pluge signals.
Off: For normal use.

DNR (Digital Noise Reduction)

You can view a picture with less video noise.
DNR1: Normal level
DNR2: Expanded level.
Off: Off.

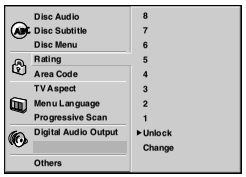
Notes

– Actual picture enhancement may vary depending on the quality of the disc.
– While the DNR2 (expanded level) can provide additional improvement in the reduction of noise in the video signal, it may produce undesirable picture artifacts on some discs. Should this occur, select a more appropriate DNR level (normal or off).
– Depending on the disc, some picture detail may be lost by the picture enhancement.
– A DVD audio disc with Dolby Digital or DTS soundtrack may be played, some DVD audio discs include moving pictures which may be modified by the above processes.

Parental Control

Rating DVD

Movies on DVDs may contain scenes not suitable for children. Therefore, discs may contain Parental Control information that applies to the complete disc or to certain scenes on the disc. These scenes are rated from 1 to 8, and alternatively, more suitable scenes are available for selection on some discs. Ratings are country-dependent. The Parental Control feature allows you to prevent discs from being played by your children or to have certain discs played with alternative scenes.



1 **Select "Rating" on the Setup menu using the ▲ and ▼ buttons.**

2 **While "Rating" is selected, press ▶.**

3 **When you have not entered a password yet;**
Enter a 4-digit password using the numbered buttons to create a personal 4-digit security password, then press ENTER. And enter the 4-digit password again and press ENTER to verify.
When you have already entered a password;
Enter a 4-digit password using the numbered buttons to confirm the personal 4-digit security password, then press ENTER.

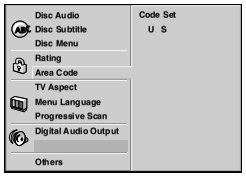
If you make a mistake before pressing ENTER, press CLEAR and enter 4-digit security password again.

4 **Select a rating from 1 to 8 using the ▲/▼ buttons. One (1) has the least playback restrictions. Eight (8) has the most playback restrictions.**
Unlock: *If you select Unlock, Parental Control is not active. The disc will play in full.*
Ratings 1 to 8: *Some discs contain scenes not suitable for children. If you set a rating for the player, all disc scenes with the same rating or lower will be played. Higher rated scenes will not be played unless an alternative scene is available on the disc. The alternative must have the same rating or a lower one. If no suitable alternative is found, playback will stop. You must enter the 4-digit password or change the rating level in order to play the disc.*

5 **Press ENTER to confirm your rating selection, then press SETUP to exit the menu.**

Area Code DVD

Enter the code of a country/area whose standards were used to rate the DVD video disc, referring to the list (See "Area Code List", page 25.).



1 **Select Area Code using the ▲/▼ buttons on the setup menu.**

2 **While Area Code is selected, press ▶.**

3 **Follow step 3 of "Rating" on left.**

4 **Select the first character using the ▲/▼ buttons.**

5 **Shift the cursor using ◀/▶ buttons and select the second character using ▲/▼ buttons.**

6 **Press ENTER to confirm your country code selection, then press SETUP to exit the menu.**

Note

Confirmation of the 4-digit password is necessary when the code is changed (see "Changing the 4-digit code" below).

Changing the 4-digit code

1 Follow Steps 1-2 as shown above to the left (Rating).
2 Enter the old code, then press ENTER.
3 Select Change using the ▲/▼ buttons then press ENTER.
4 Enter the new 4-digit code, then press ENTER.
5 Enter exactly the same code a second time and verify by pressing ENTER.
6 Press SETUP to exit the menu.

If you forget your 4-digit code

If you forget your password, to clear the current password, follow the procedure below.

1 Press SETUP to display the setup menu.
2 Use the Number buttons to enter the 6-digit number "210499."
The 4-digit password is cleared. "P CLr" appears on the display. The message will appear if the disc tray is closed. It will be on the display until you try another feature.
3 Enter a new code as shown above to the left (Rating).

Operation with DVD and Video CD

Playing a DVD and Video CD

Playback Setup DVD VCD2.0 VCD1.1

- Turn on the TV and select the video input source connected to the DVD player.
- Audio system: Turn on the audio system and select the input source connected to the DVD player.

1 Press OPEN/CLOSE to open the disc tray.

2 Load your chosen disc in the tray, with the label facing up.
When a double-sided DVD is inserted, make sure the side you want to play is facing up.
- Discs can be loaded one at a time by pressing DISC SKIP to rotate the carousel.

3 Press OPEN/CLOSE to close the tray.
READING appears on the TV screen, and playback starts automatically. If playback does not start, press PLAY.
In some cases, the disc menu might appear instead.

If a disc menu screen is displayed
The menu screen may be displayed first after loading a DVD or Video CD which contains a menu.

DVD
Use the ◀ ▶ ▲ ▼ buttons to select the title/chapter and additional selections you want, then press ENTER to start playback.
Press TOP MENU or MENU to return to the disc menu screen.

VCD2.0
- Use the number buttons to select the track you want to view.
  Press RETURN to return to the disc menu screen.
- Menu setting and the exact operating procedures for using the disc menu may differ depending on the disc. Follow the instructions on each menu screen.
  You also may set PBC to Off under setup. See page 14.

Notes
– If Parental Control is set and the disc is not within the Rating settings (not authorized), the 4-digit code must be entered and/or the disc must be authorized (see "Parental Control", on page 15).
– DVDs may have a region code.
– Your player will not play discs that have a region code different from your player. The region code for this player is 1 (one).

Exchanging discs during playback

- Press EX-CHANGE on the front panel during playback to open the disc tray.
- Press DISC SKIP to rotate the disc trays to the desired position. The carousel will move clockwise by one disc tray.
- Exchange the discs and press EX-CHANGE or OPEN/CLOSE to close the disc tray.

Note
– The disc tray which was in the play position can not be exchanged.

Skipping discs

Press DISC SKIP during play or when playback is stopped.

Notes
– When DISC SKIP is pressed, the disc trays rotate and play begins from the beginning of the next disc.
– If there is no disc on the next disc tray, the next disc tray will be selected.
– When DISC SKIP is pressed during playback of disc 5, playback of disc 1 will start.

Exchanging the disc and starting playback

1. Press OPEN/CLOSE during playback or when playback is stopped.
   Play stops (if pressed during playback), the disc tray opens and the disc tray that was in the play position comes to the front.
2. Exchange the disc in the front.
3. Press OPEN/CLOSE or PLAY again.
   The tray closes and playback begins (with the disc that was in front).

Operation with DVD and Video CD (Cont'd)

General Features

Note
Unless stated otherwise, all operations described use the remote control. Some features may also be available on the Setup menu.

Moving to another TITLE DVD

When a disc has more than one title, you can move to another title as follows:
- Press GUI DISPLAY when playback is stopped. From the title function, press the appropriate numbered button (0-9) to select a title number.

Moving to another CHAPTER/TRACK

DVD VCD1.1

When a title on a disc has more than one chapter or a disc has more than one track, you can move to another chapter/track as follows:
- Press SKIP ⏮ or ⏭ briefly during playback to select the next chapter/track or to return to the beginning of the current chapter/track.
- Press ⏮ twice briefly to step back to the previous chapter/track.
- To go directly to any chapter during DVD playback, press GUI DISPLAY. Then, press ▲/▼ to select C (chapter) (or for a Video CD, select T for track). Then, enter the chapter/track number using the numbered buttons (0-9).

Note
For two-digit numbers, press the buttons in rapid succession.

Still Picture and Frame-by-frame playback

DVD VCD2.0 VCD1.1

1 Press PAUSE/STEP during playback.
The player will now go into PAUSE mode.
2 You can advance the picture frame by frame by pressing PAUSE/STEP repeatedly on the remote control.

Slow Motion DVD VCD2.0 VCD1.1

1 Press SLOW ◀❙ or ❙▶ during playback.
The player will enter SLOW mode.
2 Use the SLOW ◀❙ or ❙▶ to select the required speed: ◀❙ 1/16, ◀❙ 1/8, ◀❙ 1/4 or ◀❙ 1/2 (reverse), or ❙▶ 1/16, ❙▶ 1/8, ❙▶ 1/4 or ❙▶ 1/2 (forward).
3 To exit slow motion mode, press PLAY.

Note
Slow motion playback in reverse is not applicable for Video CD.

Search DVD VCD2.0 VCD1.1

1 Press REV ◀◀ or FWD ▶▶ during playback.
The player will now go into SEARCH mode.
2 Press REV ◀◀ or FWD ▶▶ repeatedly to select the required speed: ◀◀X2, ◀◀X4, ◀◀X16, ◀◀X100 (backward) or ▶▶X2, ▶▶X4, ▶▶X16, ▶▶X100 (forward).
With a Video CD, the Search speed changes: ◀◀X2, ◀◀X4, ◀◀X8 (backward) or ▶▶X2, ▶▶X4, ▶▶X8 (forward).
3 To exit SEARCH mode, press PLAY.

Random Karaoke DVD VCD1.1

1 Press RANDOM during playback or in stop mode.
The unit automatically begins Random Playback and "RANDOM (1-3)" appears on the TV screen.
- RANDOM1: Plays all the tracks on a single disc in random order and then stops.
- RANDOM2: Plays all the tracks on current disc in random order and then plays all the tracks on each succeeding disc in random order and then stops.
- RANDOM3: Plays 2 tracks randomly from a disc and then plays 2 tracks randomly from a different disc until all tracks on all discs have been played.

2 To return to normal playback, press RANDOM until "RANDOM" disappears on the display window.

Tips
By pressing SKIP ⏮ or ⏭ during Random playback, the unit selects another title (track) and resumes Random playback.

Note
This function only works with DVD Karaoke discs and video CD without PBC.

General Features (cont'd)

Repeat DVD VCD2.0 VCD1.1

DVD Video Discs - Repeat Chapter/Title/Off

1 To repeat the chapter currently playing, press REPEAT.
The Repeat Chapter icon appears on the TV screen.

2 To repeat the title currently playing, press REPEAT a second time.
The Repeat Title icon appears on the TV screen.

3 To exit Repeat mode, press REPEAT a third time.
The Repeat Off icon appears on the TV screen.

Video CDs - Repeat Track/Disc/All/Off

1 To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the TV screen.

2 To repeat the disc currently playing, press REPEAT a second time.
The Repeat Disc icon appears on the TV screen.

3 To Repeat of entire all disc contents, press REPEAT a third time.
The Repeat All icon appears on the TV screen.

4 To exit Repeat mode, press REPEAT a fourth time.
The Repeat Off icon appears on the TV screen.

Note
On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Repeat function. See page 14.

Repeat A-B DVD VCD2.0 VCD1.1

To repeat a sequence in a title:

1 Press A-B RPT at your chosen starting point.
A- appears briefly on the TV screen.

2 Press A-B RPT again at your chosen end point.
A-B appears briefly on the TV screen, and the repeat sequence begins (a-b repeat appears on the player's display).

3 To cancel the sequence, press A-B RPT.

Time Search DVD

The Time Search function allows you to start playing at any chosen time on the disc.

1 Press GUI DISPLAY during playback. The on-screen display appears on the screen.
The Time Search box shows the elapsed playing time of the current disc.

2 Within 10 seconds, press ▲/▼ to select the Time Search icon in the on-screen display.
The "-:--:--" appears in the Time Search box.

3 Within 10 seconds, use the number buttons to enter the required start time. Enter hours, minutes and seconds from left to right in the box.
If you enter the wrong numbers, press CLEAR to remove the numbers you entered. Then enter the correct numbers.

4 Within 10 seconds, press ENTER to confirm the start time.
Playback starts from the selected time on the disc. If you enter an invalid time, playback will continue from the current point.

Selecting the sound enhancement

DVD

Press E.A.M. to select the sound enhancement during playback.

NORM. : Normal sound
3D SUR: This unit can produce a 3D Surround effect, which simulates multi-channel audio playback from two conventional stereo speakers, instead of the five or more speakers normally required to listen to multi-channel audio from a home theater system.
DIALOGUE: To control critical center channel information to make dialogue more intelligible (only when playing a DVD video disc recorded on the Dolby Digital recording system).
- To use this enhancement on sounds output from the DIGITAL AUDIO OUT jack, be sure to set "Digital Audio Output" to "PCM". See page 14.

Zoom DVD VCD2.0 VCD1.1

The Zoom function allows you to enlarge the video image and to move the focus point of enlarged image.

1 Press ZOOM during playback or still playback to activate the Zoom function.
If you press ZOOM repeatedly, the magnification level increases up to six times.

2 Use the ◀/▶/▲/▼ buttons to move focus point zoomed picture.

3 Press CLEAR to resume normal playback or return to the paused image.

Note
- The zoom function may not work for some DVDs.
- The zoom function may not work on multi-angle scenes.

Operation with DVD and Video CD (Cont'd)

General Features (cont'd)

Marker Search DVD VCD2.0 VCD1.1

You can start playback from a memorized point. Up to nine points can be memorized.
To enter a mark, follow these steps.

1 During disc playback, press MARKER when playback reaches the spot that you want to memorize.
The Marker icon will appear on the TV screen briefly.

2 Repeat step 1 to enter up to nine Marker points on a disc.

To Recall a Marked Scene

1 During disc playback, press SEARCH.
The MARKER SEARCH menu will appear on the screen.

2 Within 10 seconds, press ◀/▶ to select a Marker number that you want to recall.

3 Press ENTER.
Playback will start from the Marked scene.

4 To remove the MARKER SEARCH menu, press SEARCH.

To clear a Marked Scene

1 During disc playback, press SEARCH.
The MARKER SEARCH menu will appear on the screen.

2 Press ◀/▶ to select the Marker number that you want to erase.

3 Press CLEAR.
The Marker number will be erased from the list.

4 Repeat steps 2 and 3 to erase additional Marker numbers.

5 To remove the MARKER SEARCH menu, press SEARCH.

Note
All the markers are cleared when the power is turned off or the disc is removed.

Special DVD Features DVD

Checking the contents of DVD Video discs: Menus

DVDs may contain menus that allow you to access special features. To use the disc menu, press MENU. Then, press the appropriate number button to select an option. Or, use the ◀/▶/▲/▼ buttons to highlight your selection, then press ENTER.

Title Menu DVD

1 Press TOP MENU.
If the current title has a menu, the menu will appear on the screen. Otherwise, the disc menu may appear.

2 The menu can list camera angles, spoken language and subtitle options, and chapters for the title.

3 To remove the title menu, press TOP MENU again.

Disc Menu DVD

1 Press MENU.
The disc menu is displayed.

2 To remove the disc menu, press MENU again.

Camera Angle DVD

If the disc contains scenes recorded at different camera angles, you can change to a different camera angle during playback.
- Press ANGLE repeatedly during playback to select a desired angle.
The number of the current angle appears on the display.

Changing the Audio Language DVD

Press AUDIO repeatedly during playback to hear a different audio language or audio track.

Changing the Audio Channel VCD

Press AUDIO repeatedly during playback to hear a different audio channel (STEREO, LEFT or RIGHT).

Subtitles DVD

Press SUBTITLE repeatedly during playback to see the different subtitle languages.

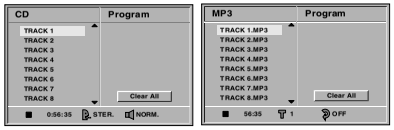
Note
If ⃠ appears, the feature is not available on the disc.

Operation with Audio CD and MP3 Disc

Playing an Audio CD and MP3 disc

The DVD Player can play MP3 formatted recordings on CD-ROM, CD-R or CD-RW discs.
Before playing MP3 recordings, read the notes on MP3 Recordings on page 22.

1 Insert a disc and close the tray.
The menu appears on the TV screen.



Audio CD menu **MP3 menu**

2 Press ▲/▼ to select a track then press PLAY.
Playback starts.
During playback, the current track's elapsed playing time will appear on the display.
Playback will stop at the end of the disc.

3 To stop playback at any other time, press STOP.

Pause CD MP3

1 Press PAUSE/STEP during playback.
2 To return to playback, press PLAY or press PAUSE/STEP again.

Moving to another Track CD MP3

- Press SKIP ⏮ or ⏭ once during playback to go to the next track or to return to the beginning of the current track.
- Press SKIP ⏮ twice briefly to step back to the previous track.
- In case of audio CD, to go directly to any track, enter the track number using the numbered buttons (0-9) during playback.

Repeat Track/All/Off CD MP3

1 To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the menu screen.
2 To repeat all tracks on a disc, press REPEAT a second time.
The Repeat All icon appears on the menu screen.
3 To cancel Repeat mode, press REPEAT a third time.
The Repeat Off icon appears on the menu screen.

Search CD

1 Press REV ◀◀ or FWD ▶▶ during playback.
The player will now go into SEARCH mode.
2 Press REV ◀◀ or FWD ▶▶ repeatedly to select the required speed: ◀◀X2, ◀◀X4, ◀◀X8 (backward) or ▶▶X2, ▶▶X4, ▶▶X8 (forward).
3 Search speed and direction are indicated on the menu screen.
4 To exit SEARCH mode, press PLAY.

Random CD

1 Press RANDOM during playback or when playback is stopped.
The unit automatically begins Random Playback and RANDOM or "RAND." appears on the display window and menu screen.
2 To return to normal playback, press RANDOM repeatedly until RANDOM or "RAND." disappears on the display window and menu screen.

Repeat A-B CD

To repeat a sequence.
1 During disc playback, press A-B RPT at your chosen starting point.
The Repeat icon and "A -" appears on the menu screen.
2 Press A-B RPT again at your chosen end point.
The Repeat icon and "A B" appears on the menu screen, and the sequence begins to play repeatedly.
3 To exit the sequence and return to normal play, press A-B RPT again.
The Repeat icon and "OFF" appears on the menu screen.

3D Surround CD

This unit can produce a 3D Surround effect, which simulates multi-channel audio playback from two conventional stereo speakers, instead of the five or more speakers normally required to listen to multi-channel audio from a home theater system.
1 Press E.A.M. to select 3D SUR during playback.
2 To turn off the 3D Surround effect, press E.A.M. again to select NORM.

Changing the Audio Channel CD

Press AUDIO repeatedly during playback to hear a different audio channel (STEREO, LEFT or RIGHT).

Programmed Playback CD MP3 VCD2.0 VCD1.1

Programmed Playback with Audio CD and MP3 Disc

Program allows you to store your favorite tracks for a particular disc in the player memory.

Program can contain 32 tracks (Audio CD) or 60 tracks (MP3 disc).

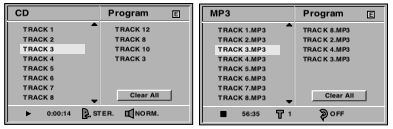
1 Insert the disc and close the tray.
The menu is displayed on the TV screen.

2 Press PROGRAM during playback or in the stop mode to enter the Program Edit mode.
The E mark will appear to the right of the word Program on the right side of the menu screen.

Note
Press PROGRAM to exit the Program Edit mode;
the E mark will disappear.

3 Press ▲/▼ to select a track then press ENTER to place the selected track on the Program list.

4 Repeat step 3 to place additional tracks on the Program list.



Audio CD menu **MP3 menu**

5 Press ▶.
The programmed track you selected last is highlighted on the program list.

6 Press ▲/▼ to select the track you want to start playing.
Press TOP MENU to move to the next page.
Press MENU to move to the previous page.

7 Press PLAY to start.
Playback begins in the order in which you programmed the tracks and "PROG." appears on the menu screen..
Playback stops after all of the tracks on the Program list have played once.

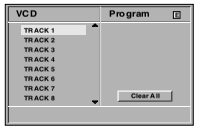
Note
The programmed tracks are cleared when the power is turned off or the disc is removed.

Programmed Playback with Video CD

Note
On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Program function. See page 14.

1 Insert Video CD and close the tray.

2 Press PROGRAM while playback is stopped.
The VCD Program menu will appear.



Note
Press RETURN or PROGRAM to exit the Program menu.

3 Follow steps 3-7 of "Programmed Playback with Audio CD and MP3 Disc" on left.

Repeat Programmed Tracks/All

- To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the menu screen.
- To repeat all tracks on the program list, press REPEAT a second time.
The Repeat All icon appears on the menu screen.
- To cancel Repeat mode, press REPEAT a third time.
The Repeat Off icon appears on the menu screen.

Erasing a Track from Program List

1 Press PROGRAM during playback or in the stop mode to enter the Program Edit mode.
The E mark will appear.
2 Press ▶ to move to the Program list.
3 Use ▲/▼ to select the track that you wish to erase from the Program list.
4 Press CLEAR.
The track will be erased from the Program list.

Erasing the Complete Program List

1 Follow steps 1-2 of "Erasing a Track from Program List" as above.
2 Use ▲/▼ to select "Clear All", then press ENTER.
The complete Program for the disc will be erased.
The programs are also cleared when the disc is removed.

To resume normal playback from programmed playback

Press and hold PROGRAM for 3 seconds until "PROG." indicator disappears in the display window.

Additional Information

Last Condition Memory

DVD CD VCD1.1

This player memorizes the last condition for the last disc you have watched. Settings remain in memory even if you remove the disc from the player or switch off the player. If you load a disc that has its settings memorized, the latest stop position is automatically recalled.

Notes

– Settings are stored in memory for use any time.
– This player does not memorize settings of a disc if you switch off the player before commencing playback.

Screen Saver

A screen saver image appears when you leave the DVD Player in stop mode for about five minutes.
After the Screen Saver has been engaged for about five minutes, the DVD Player will automatically turn itself off.

Video Mode Setting DVD VCD2.0 VCD1.1

- With certain discs, the playback picture may be flickering or Dot Crawl is shown on straight lines. That means Vertical interpolation or De-interlace is not perfectly matched with the disc. In this case, the picture quality may be improved by changing the video mode.
- To change the video mode, press and hold GUI DISPLAY about 3 seconds during disc playback. The new video mode number selected is displayed on the TV screen. Check whether the video quality has improved. If not, repeat the above procedure until picture quality is improved.
- Video mode change sequence:
  Video1 → Video2 → Film → Adapt → Auto.
- If you turn off the power, the video mode will return to initial state (Auto).

Detailed Description of each Video Mode

Auto : The image material types of the DVD video (film material or video material) are distinguished by this player based on the disc information.

Video1 : Suitable for playing the disc of video material which has comparatively little motion.

Video2 : Suitable for playing the disc of video material which has comparatively more motion.

Film : Suitable for playing the disc of film material or of video material recorded by the progressive scan method.

Adapt : Determines the material type (film or video) during playback disc, and automatically selects the proper mode. Suitable for playing a disc comprised of film and video based content.

Dimmer Function

You can control the Display Window's brightness in 3 steps. Each press of the FL DIM button modifies the Display Window's brightness in the following order:

Normal → Dim → Display Off → Normal

Notes on MP3 Discs

About MP3

- An MP3 file is audio data compressed by using the MPEG1 audio layer-3 file-coding scheme. We call files that have the ".mp3" file extension "MP3 files".
- The player can not read an MP3 file that has a file extension other than ".mp3".
- The player can not read a non MP3 encoded file that has a file extension ".mp3".

MP3 Disc compatibility with this player is limited as follows:

1. Sampling Frequency / only at 44.1kHz
2. Bit rate / within 32 - 320kbps
3. CD-R physical format should be "ISO 9660"
4. If you record MP3 files using the software which cannot create a FILE SYSTEM, for example "Direct-CD" etc., it is impossible to playback MP3 files. We recommend that you use "Easy-CD Creator", which creates an ISO9660 file system.
5. A single session disc requires MP3 files in the first track. If there is no MP3 file in the 1st track, it cannot playback MP3 files. If you wish to playback MP3 files, format all the data in the disc or use a new one.
6. We do not recommend using CD-RW discs. Please use finished CD-R discs only.
7. File names should be named using 8 letters or less and must incorporate ".mp3" extension
   e.g. "********.MP3".
8. Do not use special letters such as "_?!><+*}{`[@];:\/.," etc.
9. Total number of files on the disc should be less than 200.
10. Use 74 minute CD-R discs (650M), Do not use 80 minute CD-R (700M) software

This DVD player requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3 files). That require certain pre-existing conditions (see above) to insure compatible playback.

Customers should also note that permission is required in order to download MP3 files and music from the Internet. TOSHIBA cannot grant such permission. Permission should always be sought from the copyright owner.

Troubleshooting

Check the following guide for the possible cause of a problem before contacting service.

Symptom	Cause	Correction
No power.	• The power cord is disconnected.	• Plug the power cord into the wall outlet securely.
The power is on, but the DVD player does not work.	• No disc is inserted.	• Insert a disc. (Check that the DVD or, audio CD indicator in the display window is lit.)
No picture.	• The TV is not set to receive DVD signal output.	• Select the appropriate video input mode on the TV so the picture from the DVD player appears on the TV screen.
	• The video cable is not connected securely.	• Connect the video cable into the jacks securely.
	• The connected TV power is turned off.	• Turn on the TV.
No sound.	• The equipment connected with the audio cable is not set to receive DVD signal output.	• Select the correct input mode of the audio receiver so you can listen to the sound from the DVD player.
	• The audio cables are not connected securely.	• Connect the audio cable into the jacks securely.
	• The power of the equipment connected with the audio cable is turned off.	• Turn on the equipment connected with the audio cable.
	• The Digital Audio Output is set to the wrong position.	• Set the Digital Audio Output to the correct position, then turn on the DVD player again by pressing POWER.
The playback picture is poor.	• The disc is dirty.	• Clean the disc.
The DVD player does not start playback.	• No disc is inserted.	• Insert a disc. (Check that the DVD, or audio CD indicator in the DVD display is lit.)
	• An unplayable disc is inserted.	• Insert a playable disc. (Check the disc type, color system and Regional code.)
	• The disc is placed upside down.	• Place the disc with the playback side down.
	• The disc is not placed within the guide.	• Place the disc on the disc tray correctly inside the guide.
	• The disc is dirty.	• Clean the disc.
	• The Rating level is set.	• Cancel the Rating function or change the rating level.
The remote control does not work properly.	• The remote control is not pointed at the remote sensor of the DVD player.	• Point the remote control at the remote sensor of the DVD player.
	• The remote control is too far from the DVD player.	• Operate the remote control within about 23 ft (7 m).
	• There is an obstacle in the path of the remote control and the DVD player.	• Remove the obstacle.
	• The batteries in the remote control are exhausted.	• Replace the batteries with new ones.

Language Code List

Enter the appropriate code number for the initial settings “Disc Audio”, “Disc Subtitle” and/or “Disc Menu” (See page 13).

Code	Language	Code	Language	Code	Language	Code	Language
6565	Afar	7079	Faroese	7678	Lingala	8375	Slovak
6566	Abkhazian	7082	French	7679	Laothian	8376	Slovenian
6570	Afrikaans	7089	Frisian	7684	Lithuanian	8377	Samoan
6577	Ameharic	7165	Irish	7686	Latvian, Lettish	8378	Shona
6582	Arabic	7168	Scots Gaelic	7771	Malagasy	8379	Somali
6583	Assamese	7176	Galician	7773	Maori	8381	Albanian
6588	Aymara	7178	Guarani	7775	Macedonian	8382	Serbian
6590	Azerbaijani	7185	Gujarati	7776	Malayalam	8385	Sudanese
6665	Bashkir	7265	Hausa	7778	Mongolian	8386	Swedish
6669	Byelorussian	7273	Hindi	7779	Moldavian	8387	Swahili
6671	Bulgarian	7282	Croatian	7782	Marathi	8465	Tamil
6672	Bihari	7285	Hungarian	7783	Malay	8469	Telugu
6678	Bengali; Bangla	7289	Armenian	7784	Maltese	8471	Tajik
6679	Tibetan	7365	Interlingua	7789	Burmese	8472	Thai
6682	Breton	7378	Indonesian	7865	Nauru	8473	Tigrinya
6765	Catalan	7383	Icelandic	7869	Nepali	8475	Turkmen
6779	Corsican	7384	Italian	7876	Dutch	8476	Tagalog
6783	Czech	7387	Hebrew	7879	Norwegian	8479	Tonga
6789	Welsh	7465	Japanese	7982	Oriya	8482	Turkish
6865	Danish	7473	Yiddish	8065	Panjabi	8484	Tatar
6869	German	7487	Javanese	8076	Polish	8487	Twi
6890	Bhutani	7565	Georgian	8083	Pashto, Pushto	8575	Ukrainian
6976	Greek	7575	Kazakh	8084	Portuguese	8582	Urdu
6978	English	7576	Greenlandic	8185	Quechua	8590	Uzbek
6979	Esperanto	7577	Cambodian	8277	Rhaeto-Romance	8673	Vietnamese
6983	Spanish	7578	Kannada	8279	Rumanian	8679	Volapük
6984	Estonian	7579	Korean	8285	Russian	8779	Wolof
6985	Basque	7583	Kashmiri	8365	Sanskrit	8872	Xhosa
7065	Persian	7585	Kurdish	8368	Sindhi	8979	Yoruba
7073	Finnish	7589	Kirghiz	8372	Serbo-Croatian	9072	Chinese
7074	Fiji	7665	Latin	8373	Singhalese	9085	Zulu

Area Code List

Enter the appropriate code number for the initial setting “Area Code” (See page 15).

Code	Country	Code	Country	Code	Country	Code	Country
AD	Andorra	ER	Eritrea	LC	Saint Lucia	SC	Seychelles
AE	United Arab Emirates	ES	Spain	LI	Liechtenstein	SD	Sudan
AF	Afghanistan	ET	Ethiopia	LK	Sri Lanka	SE	Sweden
AG	Antigua and Barbuda	FI	Finland	LR	Liberia	SG	Singapore
AI	Anguilla	FJ	Fiji	LS	Lesotho	SH	Saint Helena
AL	Albania	FK	Falkland Islands	LT	Lithuania	SI	Slovenia
AM	Armenia	FM	Micronesia	LU	Luxembourg	SJ	Svalbard and Jan Mayen Islands
AN	Netherlands Antilles	FO	Faroe Islands	LV	Latvia		
AO	Angola	FR	France	LY	Libya	SK	Slovak Republic
AQ	Antarctica	FX	France (European Territory)	MA	Morocco	SL	Sierra Leone
AR	Argentina			MC	Monaco	SM	San Marino
AS	American Samoa	GA	Gabon	MD	Moldavia	SN	Senegal
AT	Austria	GB	Great Britain	MG	Madagascar	SO	Somalia
AU	Australia	GD	Grenada	MH	Marshall Islands	SR	Suriname
AW	Aruba	GE	Georgia	MK	Macedonia	ST	Saint Tome and Principe
AZ	Azerbaidjan	GF	French Guyana	ML	Mali	SU	Former USSR
BA	Bosnia-Herzegovina	GH	Ghana	MM	Myanmar	SV	El Salvador
BB	Barbados	GI	Gibraltar	MN	Mongolia	SY	Syria
BD	Bangladesh	GL	Greenland	MO	Macau	SZ	Swaziland
BE	Belgium	GM	Gambia	MP	Northern Mariana Islands	TC	Turks and Caicos Islands
BF	Burkina Faso	GN	Guinea	MQ	Martinique (French)	TD	Chad
BG	Bulgaria	GP	Guadeloupe (French)	MR	Mauritania	TF	French Southern Territories
BH	Bahrain	GQ	Equatorial Guinea	MS	Montserrat		
BI	Burundi	GR	Greece	MT	Malta	TG	Togo
BJ	Benin	GS	S. Georgia & S. Sandwich Isls.	MU	Mauritius	TH	Thailand
BM	Bermuda			MV	Maldives	TJ	Tadjikistan
BN	Brunei Darussalam	GT	Guatemala	MW	Malawi	TK	Tokelau
BO	Bolivia	GU	Guam (USA)	MX	Mexico	TM	Turkmenistan
BR	Brazil	GW	Guinea Bissau	MY	Malaysia	TN	Tunisia
BS	Bahamas	GY	Guyana	MZ	Mozambique	TO	Tonga
BT	Bhutan	HK	Hong Kong	NA	Namibia	TP	East Timor
BV	Bouvet Island	HM	Heard and McDonald Islands	NC	New Caledonia (French)	TR	Turkey
BW	Botswana			NE	Niger	TT	Trinidad and Tobago
BY	Belarus	HN	Honduras	NF	Norfolk Island	TV	Tuvalu
BZ	Belize	HR	Croatia	NG	Nigeria	TW	Taiwan
CA	Canada	HT	Haiti	NI	Nicaragua	TZ	Tanzania
CC	Cocos (Keeling) Islands	HU	Hungary	NL	Netherlands	UA	Ukraine
CF	Central African Republic	ID	Indonesia	NO	Norway	UG	Uganda
CG	Congo	IE	Ireland	NP	Nepal	UK	United Kingdom
CH	Switzerland	IL	Israel	NR	Nauru	UM	USA Minor Outlying Islands
CI	Ivory Coast	IN	India	NU	Niue		
CK	Cook Islands	IO	British Indian Ocean Territory	NZ	New Zealand	US	United States
CL	Chile			OM	Oman	UY	Uruguay
CM	Cameroon	IQ	Iraq	PA	Panama	UZ	Uzbekistan
CN	China	IR	Iran	PE	Peru	VA	Vatican City State
CO	Colombia	IS	Iceland	PF	Polynesia (French)	VC	Saint Vincent & Grenadines
CR	Costa Rica	IT	Italy	PG	Papua New Guinea		
CS	Former Czechoslovakia	JM	Jamaica	PH	Philippines	VE	Venezuela
CU	Cuba	JO	Jordan	PK	Pakistan	VG	Virgin Islands (British)
CV	Cape Verde	JP	Japan	PL	Poland	VI	Virgin Islands (USA)
CX	Christmas Island	KE	Kenya	PM	Saint Pierre and Miquelon	VN	Vietnam
CY	Cyprus	KG	Kyrgyzstan	PN	Pitcairn Island	VU	Vanuatu
CZ	Czech Republic	KH	Cambodia6	PR	Puerto Rico	WF	Wallis and Futuna Islands
DE	Germany	KI	Kiribati	PT	Portugal	WS	Samoa
DJ	Djibouti	KM	Comoros	PW	Palau	YE	Yemen
DK	Denmark	KN	Saint Kitts & Nevis Anguilla	PY	Paraguay	YT	Mayotte
DM	Dominica	KP	North Korea	QA	Qatar	YU	Yugoslavia
DO	Dominican Republic	KR	South Korea	RE	Reunion (French)	ZA	South Africa
DZ	Algeria	KW	Kuwait	RO	Romania	ZM	Zambia
EC	Ecuador	KY	Cayman Islands	RU	Russian Federation	ZR	Zaire
EE	Estonia	KZ	Kazakhstan	RW	Rwanda	ZW	Zimbabwe
EG	Egypt	LA	Laos	SA	Saudi Arabia		
EH	Western Sahara	LB	Lebanon	SB	Solomon Islands		

Specifications

General

Power requirements	AC 120V , 60 Hz
Power consumption	14W
Dimensions (approx.)	430 X 118 X 408 mm (16.9 x 4.7 x 16.1 inches) (w x h x d)
Mass (approx.)	5.7 kg (12.6 lbs)
Operating temperature	5˚C to 40˚C (41˚F to 104˚F)
Operating humidity	5 % to 90 %

System

Laser	Semiconductor laser, wavelength 650 nm
Signal system	NTSC
Frequency response	DVD (PCM 96 kHz): 8 Hz to 44 kHz DVD (PCM 48 kHz): 8 Hz to 22 kHz CD: 8 Hz to 20 kHz
Signal-to-noise ratio	More than 100dB (ANALOG OUT connectors only)
Harmonic distortion	Less than 0.008%
Dynamic range	More than 100 dB (DVD) More than 95 dB (CD)

Outputs

VIDEO OUT	1 Vp-p 75 ohms, sync negative, RCA jack x 1
S-VIDEO OUT	(Y) 1.0 V (p-p), 75 Ω, negative sync., Mini DIN 4-pin x 1 (C) 0.3 V (p-p) 75 ohms
COMPONENT VIDEO OUT	(Y) 1.0 V (p-p), 75 Ω, negative sync., RCA jack x 1 (P_B)/(P_R) 0.7 V (p-p), 75 Ω, RCA jack x 2
Audio output (digital audio)	0.5 V (p-p), 75 Ω, RCA jack x 1
Audio output (optical audio)	5 V (p-p), 75 Ω, Optical connector x 1
Audio output (analog audio)	2.0 Vrms (1 KHz, 0 dB), 330 Ω, RCA jack (L, R) x 2

Accessory

Video cable 1
Audio cable 1
Remote control 1
Batteries 2

- Design and specifications are subject to change without notice.

Manufactured under license from Dolby Laboratories. “Dolby”, and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. Copyright 1992-1997 Dolby Laboratories. All rights reserved.

“DTS” and “DTS Digital Out” are trademarks of Digital Theater Systems, Inc.

LIMITED WARRANTY DVD VIDEO PLAYER

Toshiba America Consumer Products, Inc. (“TACP”), Toshiba Hawaii (“THI”) and Toshiba Canada Limited (“TCL”) make the following limited warranties. These limited warranties extend to original purchaser or any person receiving this set as a gift from the original purchaser and to no other purchaser or transferee.

Limited Ninety (90) Day Warranty
TACP/THI warrant this product against defects in materials or workmanship for a period of ninety (90) days after the date of original retail purchase. During this period, TACP/ THI will repair or replace a defective product or part, at their option, with a new or refurbished product or part without charge to you. You must deliver the entire product to a TACP/THI Authorized Service Station. You are responsible for all transportation and insurance charges for the unit to and from the Authorized Service Station. If you live in the U.S.A. you may, at your option, return your DVD Unit to:

Toshiba America Consumer Products Inc.
Returns Center
1420C Toshiba Dr.
Lebanon, TN 37087

Upon receipt we will, at our option, exchange the DVD Unit with a new or refurbished unit. **Canadian consumers are requested to contact TCL. In Hawaii consumers are requested to contact THI.**

Limited One (1) Year Warranty
TACP/THI further warrant the parts in this product against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP/THI will repair or replace a defective product or part, at their option, with a new or refurbished product or part without charge to you, except that if a defective part is replaced after ninety (90) days from the date of the original retail purchase you pay labor charges involved in the replacement. You must also deliver the entire product to a TACP/THI Authorized Service Station. You are responsible for all transportation and insurance charges for the unit to and from the Authorized Service Station. If you live in the U.S.A. you may, at your option, return your DVD Unit to:

Toshiba America Consumer Products Inc.
Returns Center
1420C Toshiba Dr.
Lebanon, TN 37087

Upon receipt we will, at our option, exchange the DVD Unit with a new or refurbished unit. **Canadian Consumers are requested to contact TCL. In Hawaii consumers are requested to contact THI.**

Rental Units
The warranty for rental units begin with the first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

Commercial Units
Products sold and used for commercial use have a limited ninety (90) day warranty for all parts and labor.

Owner’s Manual
You should read the owner’s manual thoroughly before operating this product. You should complete and mail the enclosed Demographic card within ten (10) days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP to provide you with better customer service and improved products. Failure to return the card will not affect your rights under this warranty.

Your Responsibility
The above warranties are subject to the following conditions:
(1) You must retain your bill of sale or provide other proof of purchase.
(2) You must notify a TACP/THI/TCL /Authorized Service Station within thirty (30) days after you discover a defective product or part.
(3) All warranty servicing of this product must be made by a TACP/THI/TCL Authorized Service Station.
(4) U.S.A. warranties are effective only if the product is purchased and operated in the Continental U.S.A. or Puerto Rico.
(5) Labor service charges for set installation. Set up, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
(6) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, damage caused by Acts of God, such as lighting or fluctuations in electric power, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have been altered or modified without authorization of TACP/THI/TCL or to damage to products or part thereof which have had the serial number removed, altered, defaced or rendered illegible.
(7) Should you elect to return your DVD Unit to TACP after the ninety (90) days and within one (1) year, or after the warranty period has expired: Call (800)-631-3811 to receive information concerning an exchange price. Payment must be enclosed with product in the form of a certified check or money order including reason for return.
(8) Physically damaged DVD Units are not acceptable for repair or exchange whether in or out of warranty and will be returned as received.

(Continued)

LIMITED WARRANTY DVD VIDEO PLAYER (Continued)

How to Obtain Warranty Service

(1) Refer to the troubleshooting guide in your owner's manual. This check list may solve your problem.
(2) In the U.S.A., only call the TACP toll free number 800-631-3811, or if in Hawaii or Canada see listing below within (30) days after you find a defective product or part.
(3) Arrange for the delivery of the product to the TACP/THI/TCL Authorized Service Station or TACP Return Center. Products shipped to the Service Station must be insured and safely and securely packed, preferably in the original shipping carton, and a letter explaining the defect and also a copy of the bill of sale or other proof of purchase must be enclosed.

In the Continental United States contact:

In Hawaii contact:
Toshiba Hawaii Inc.
327 Kamakee Street
Honolulu, HA 96814
(808)-521-5377

In Canada contact:
Consumer Electronics Group
191 McNabb Street
Markham, Ontario L3R 8H2
(905)-470-5400

Consumer Electronics Group
22171 Fraserwood Way
Richmond, B.C. V6W 1J5
(604)-303-2500

Consumer Electronics Group
1643 North Service Road
Droval, QC H9P 1J1
(514)-856-4100

All warranties implied by state law, including the implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of the limited warranties set forth above. With the exception of any warranties implied by state law as hereby limited, the foregoing warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or seller with respect to the repair or replacement of any parts. In no event shall TACP/THI be liable for consequential or incidental damages.
No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP/THI arising under the warranty or under any statute, or law of the United States or any state thereof, is hereby limited to ninety (90) days from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.
This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Some states do not allow limitation on how long an implied warranty lasts, when an action may be brought, or the exclusion or limitation of incidental or consequential damages, so the above provisions may not apply to you.

ATTENTION CANADIAN CONSUMERS:
Canadian consumers are requested to complete the special Canadian "Warranty Registration Form" enclosed, and forward this completed form with a copy of bill of sale to TOSHIBA OF CANADA to "Register and Validate" their warranty. Product must be purchased from an Authorized Canadian Dealer. Products purchased in the U.S.A. and used in Canada are not covered by these warranties.

IMPORTANT: PACKING AND SHIPPING INSTRUCTION
When you send the product to a Service Station, you must use the original carton box and packing material, then insert the original carton box containing the unit into another carton using more packing material.

PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY, NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

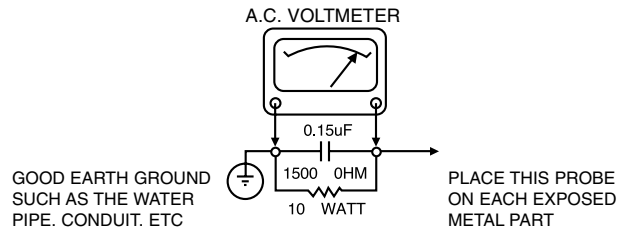
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS, FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY. FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150.V A.C TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMP A.C ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.


A.C. VOLTMETER
0.15uF
1500 0HM
10 WATT
GOOD EARTH GROUND SUCH AS THE WATER PIPE. CONDUIT. ETC
PLACE THIS PROBE ON EACH EXPOSED METAL PART

SUBJECT: GRAPHIC SYMBOLS

THE LIGHTNING FLASH WITH APROWHEAD SYMBOL. WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.

THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

SUBJECT : X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC. OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T. ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS AN X-RAY SHIELD IN COLOR SETS, ALWAYS RE-INSTALL THEM.
3. IT IS ESSNTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD, SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED. THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IT IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV. B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

SUBJECT: IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTEGRAL IMPLOSION PROTECTION SYSTEM, BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION, AVOID SCRATCHING THE TUBE. IF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE, OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM. BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS. EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

SERVICING PRECAUTIONS

CAUTION : Before servicing the DVD covered by this service data and its supplements and ADDENDUMS, read and follow the *SAFETY PRECAUTIONS. NOTE* : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publications, always follow the safety precautions.
Remember Safety First:

General Servicing Precautions

1. Always unplug the DVD AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
   (3) Connecting a test substitute in parallel with an electrolytic capacitor.
   Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this DVD or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator.
   Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with whitch instruments covered by this service manual might be equipped.

5. Do not apply AC power to this DVD and/or any of its electrical assemblies unless all solid-state device heat sinks are cerrectly installed.

6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.
Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.
The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a GROUNDED-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static solder removal device. Some solder removal devices not classified a “anti-static” can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protec tive package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

SECTION 2

CABINET & MAIN CHASSIS

CONTENTS

1. DISASSEMBLY 2-2
   CABINET DISASSEMBLY 2-2
   CIRCUIT BOARD DISASSEMBLY 2-3
2. EXPLODED VIEWS 2-4
   1. Cabinet and Main Frame Section 2-4
   2. Packing Accessory Section 2-5

DISASSEMBLY

CAUTION BEFORE STARTING SERVICING

Electronic parts are susceptible to static electricity and may easily damaged, so do not forget to take a proper grounding treatment as required.

Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screw driver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded patrs and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

CABINET DISASSEMBLY

1. Top Case

1. Release 7 screws (A). (See Fig. 2-1)
2. Lift the top case with holding the back of it, and remove it in the direction of the arrow.

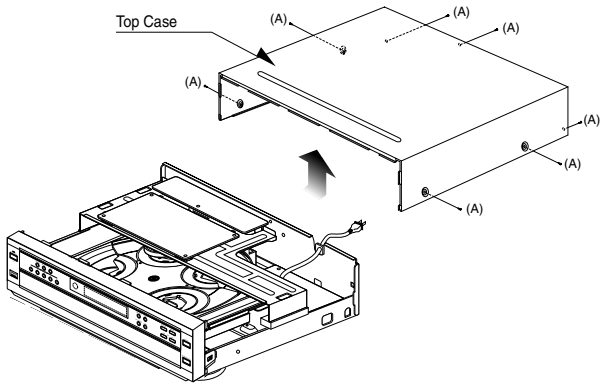


Fig. 2-1

2. Tray Door

1. Eject the disc tray.
2. Lift up the tray door in the direction of the arrow.

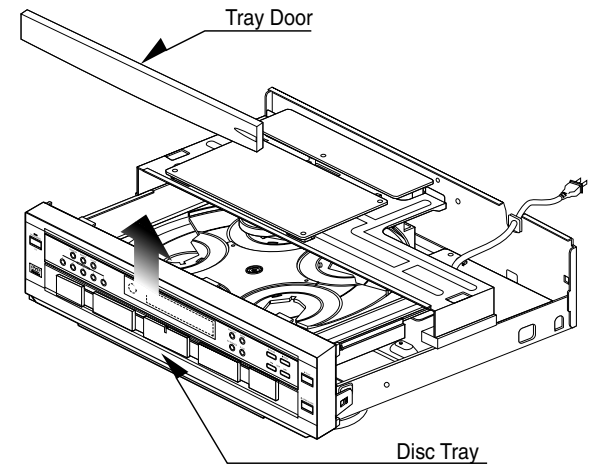


Fig. 2-2

3. Front Panel

1. Eject the disc tray. (See Fig. 2-2)
2. Remove the tray door. (See Fig. 2-2)
3. Pull the front panel toward you while pressing 5 stoppers to disengage, and remove the front panel. (See Fig. 2-3)

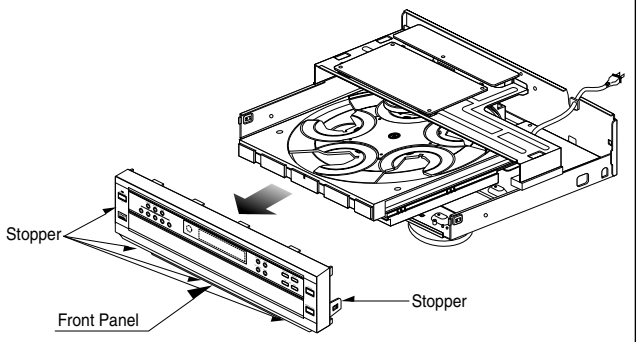


Fig. 2-3

CIRCUIT BOARD DISASSEMBLY

Note: Before removing the main circuit board, be sure to shortcircuit the laserdiode output land. After replacing the main circuit board, open the land after inserting the flexible connector. (Refer to Mechanism Disassembly)

1. Disassemble Main circuit board, Jack circuit board, Power circuit board and MD Ass'y DPM1.

1. Remove the top case.(See Fig. 2-1)
2. Remove 10 screws (B).
3. Disassemble Main circuit board and Jack circuit board from Bracket Main.
4. Unscrew 3 screws(C) at Bracket Main.
5. Disassemble Bracket Main from Main chassis.
6. Unscrew 4 screws(D) at MD Ass'y DPM1.
7. Turn the portion the direction of arrow to move the Base Assembly Tray in front of you.
8. Release the other 3 screws(E).
9. Disassemble MD Ass'y DPM1 from Main chassis.
10. Unscrew 4 screws(F) at Power circuit.
11. Disassemble power circuit board from Main chassis.

2. Digitron and Key Circuit Board

1. Remove the front panel.(See Fig. 2-3)
2. Release 6 screws (G), and remove the digitron circuit board.

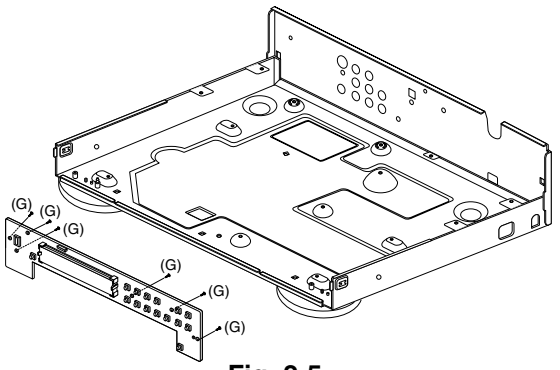


Fig. 2-5

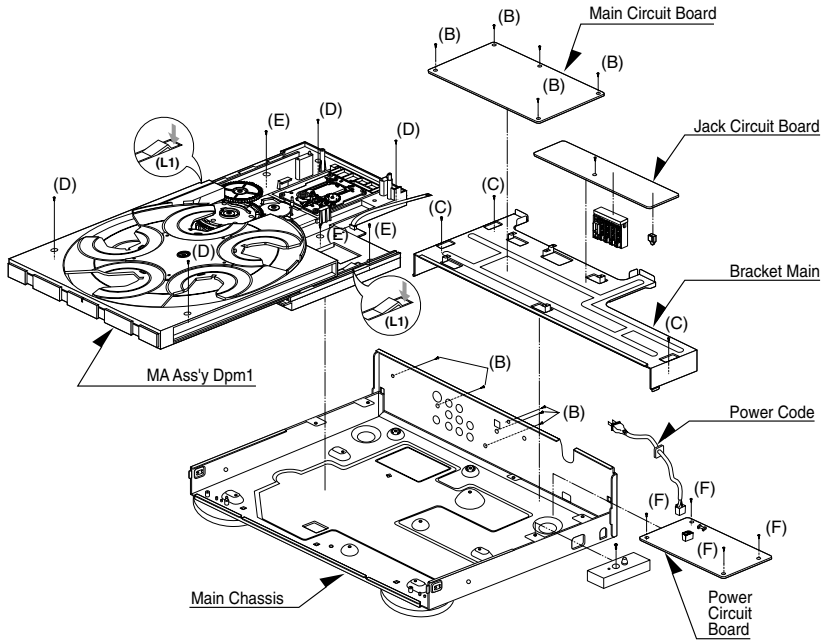
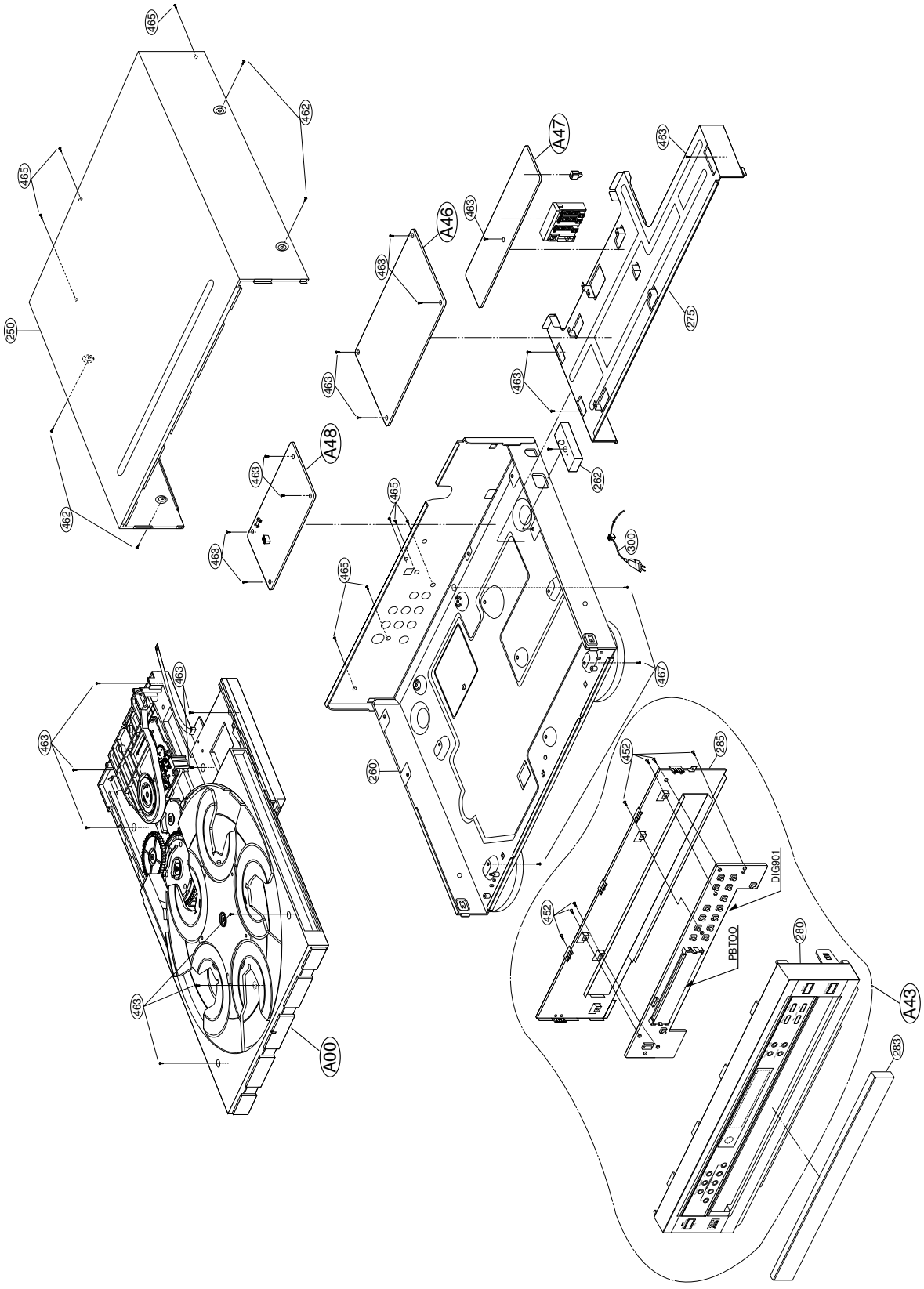


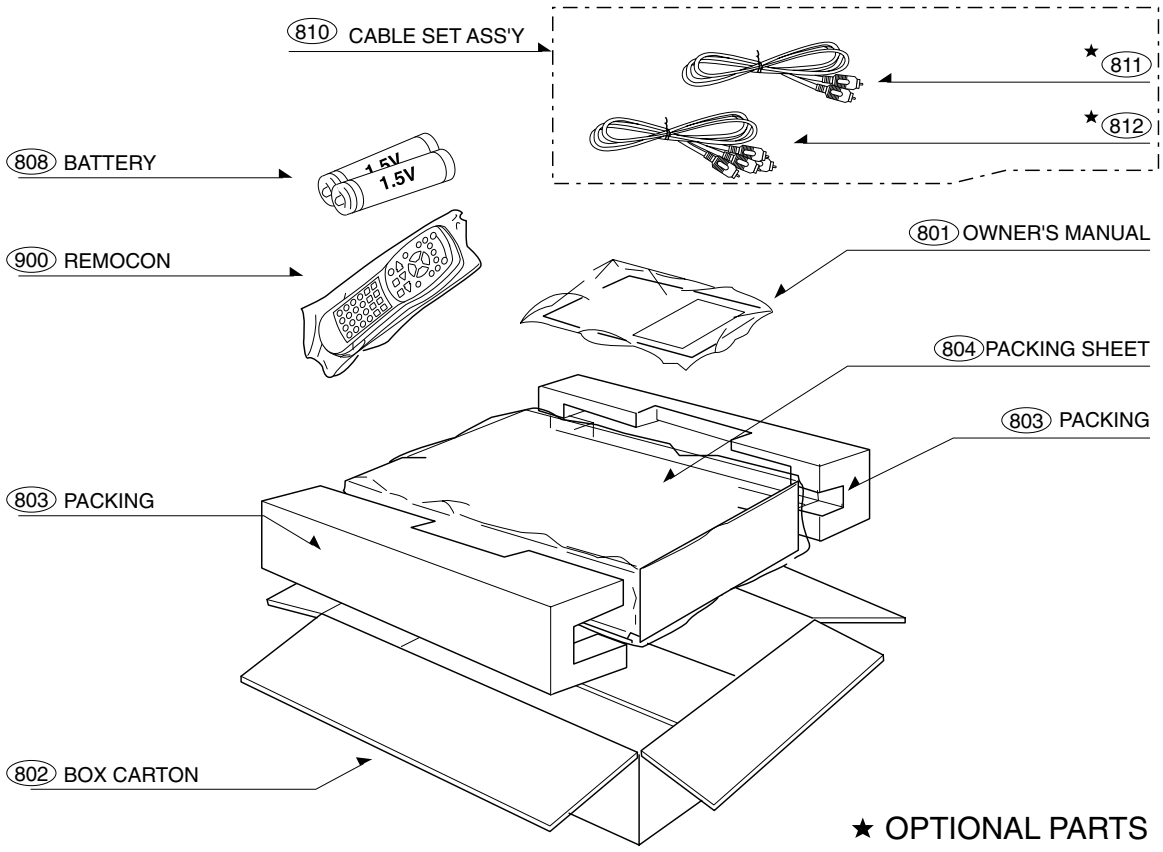
Fig. 2-4

EXPLODED VIEWS

1. Cabinet and Main Frame Section



2.Packing Accessory Section



SECTION 3
ELECTRICAL

CONTENTS

ELECTRICAL TROUBLESHOOTING GUIDE 3-2
1. Power(SMPS) Circuit 3-2
2. μ-com Circuit 3-3
3. MPEG Circuit 3-6
4. Front Circuit(Digitron & Key) 3-7
5. RF/Servo Circuit 3-8

BLOCK DIAGRAMS 3-12
1. Overall Block Diagram 3-12
2. Power (SMPS) Block Diagram 3-13
3. RF/CD DSP/DVD DSP/DVD servo Block Diagram 3-14
4. Audio Block Diagram 3-15
5. MPEG Block Diagram 3-16

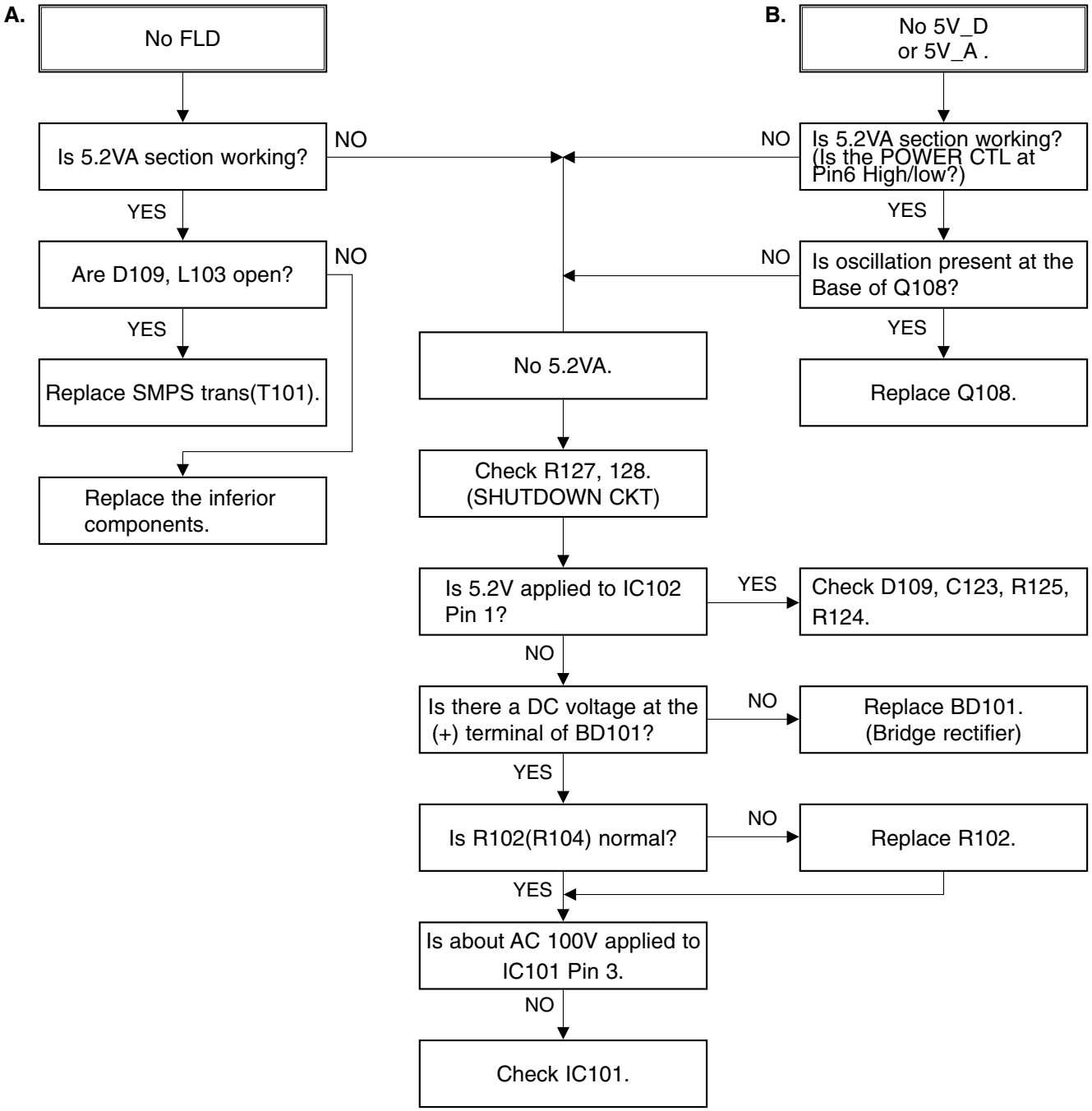
CIRCUIT DIAGRAMS 3-17
1. Power (SMPS) Circuit Diagram 3-17
2. DVD DSP Circuit Diagram 3-19
3. Drive & RF Circuit Diagram 3-21
4. MPEG Circuit Diagram 3-23
• WAVEFORMS 3-25
5. Audio DM & 5.1CH Circuit Diagram 3-27
6. TIMER & Key Circuit Diagram 3-29
7. A/V Circuit Diagram 3-31
8. A/V Jack Circuit Diagram 3-33

• CIRCUIT VOLTAGE CHART 3-35

PRINTED CIRCUIT DIAGRAMS 3-39
1. MAIN P.C.BOARD 3-39
2. AV JACK P.C.BOARD 3-41
3. SMPS P.C.BOARD 3-42
4. FRONT P.C.BOARD 3-41

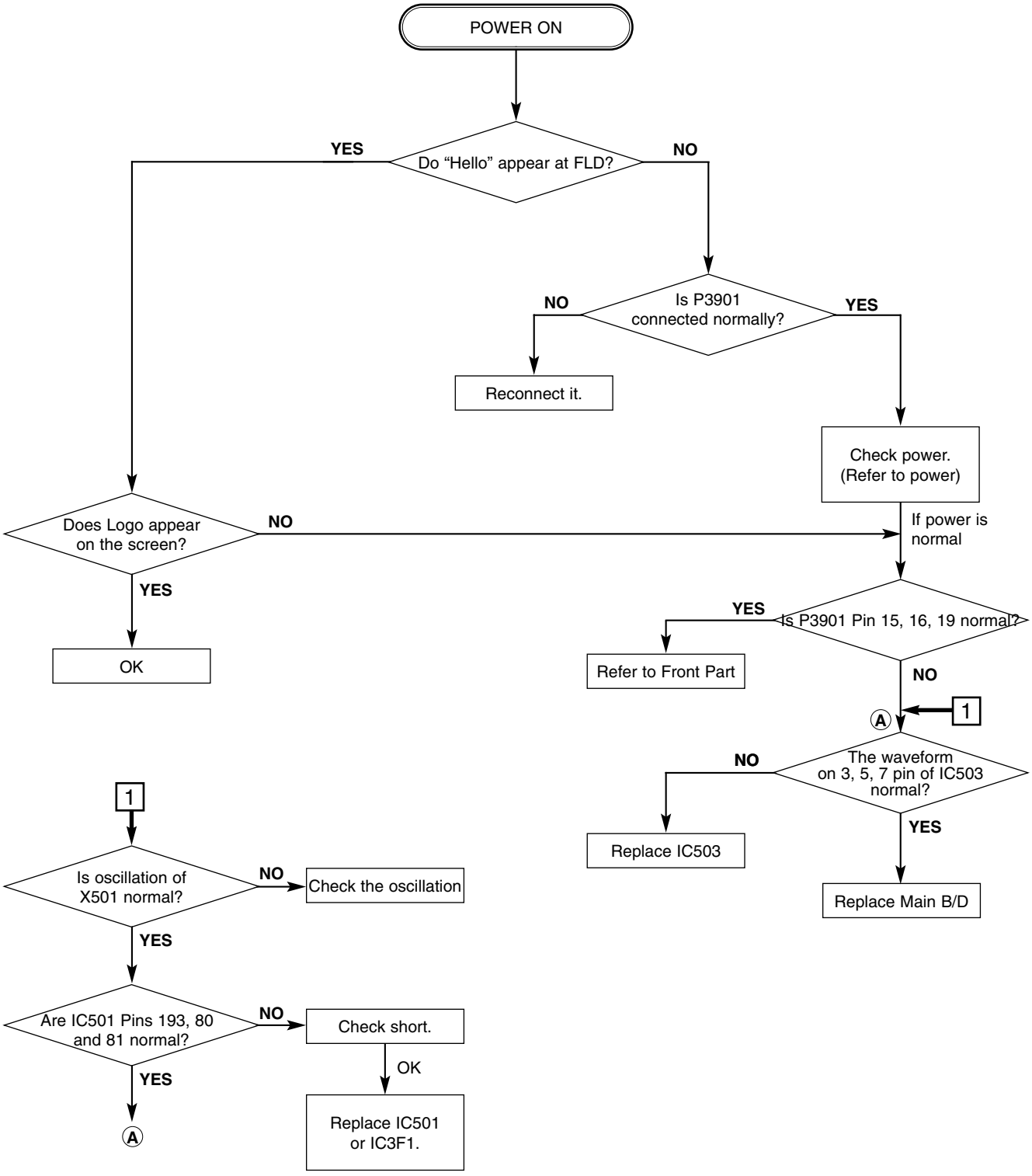
ELECTRICAL TROUBLESHOOTING GUIDE

1. Power(SMPS) Circuit

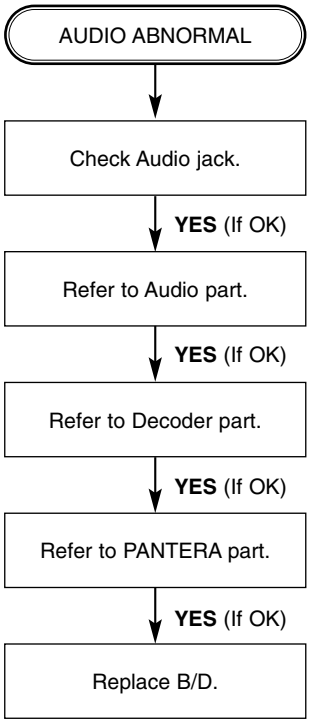


2. µ-COM Circuit

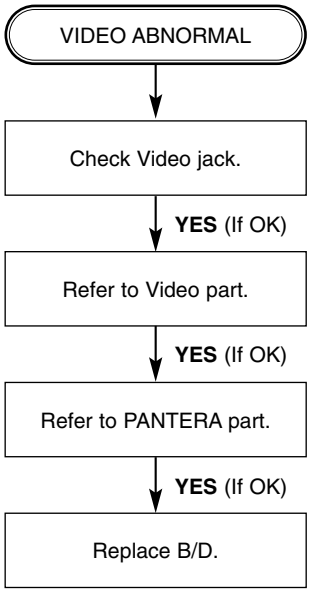
A. No Power



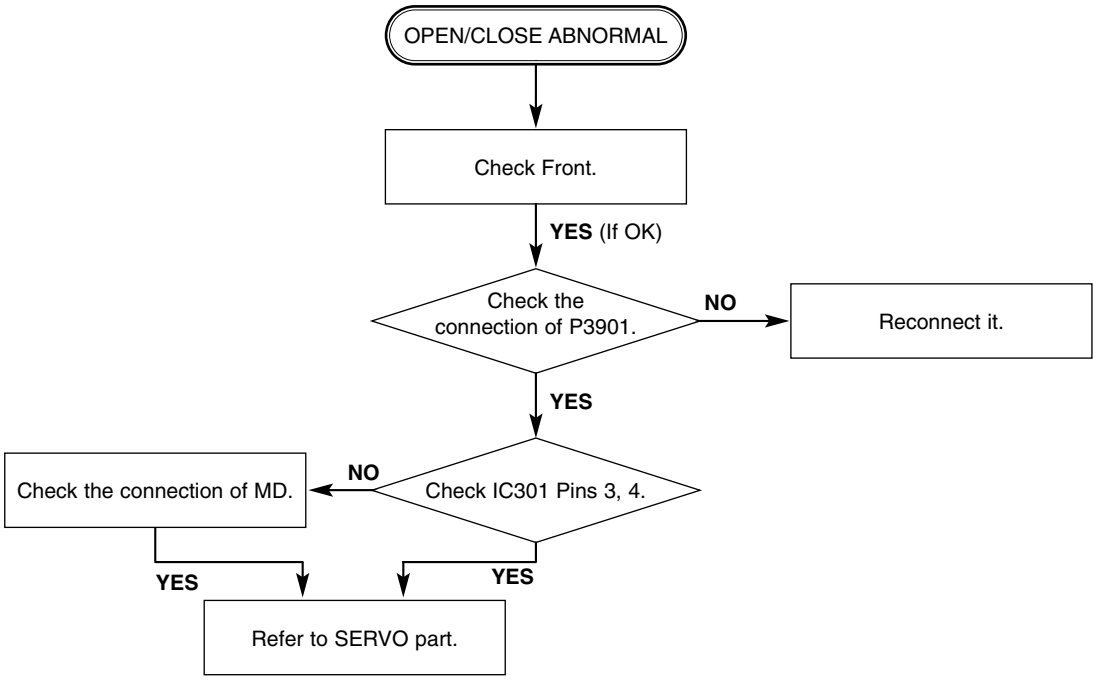
B. Audio abnormal



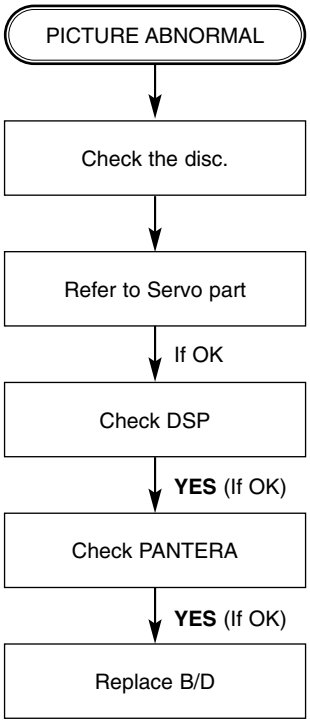
C. Video abnormal



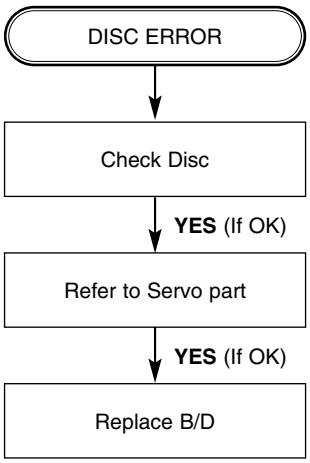
D. Open/Close abnormal



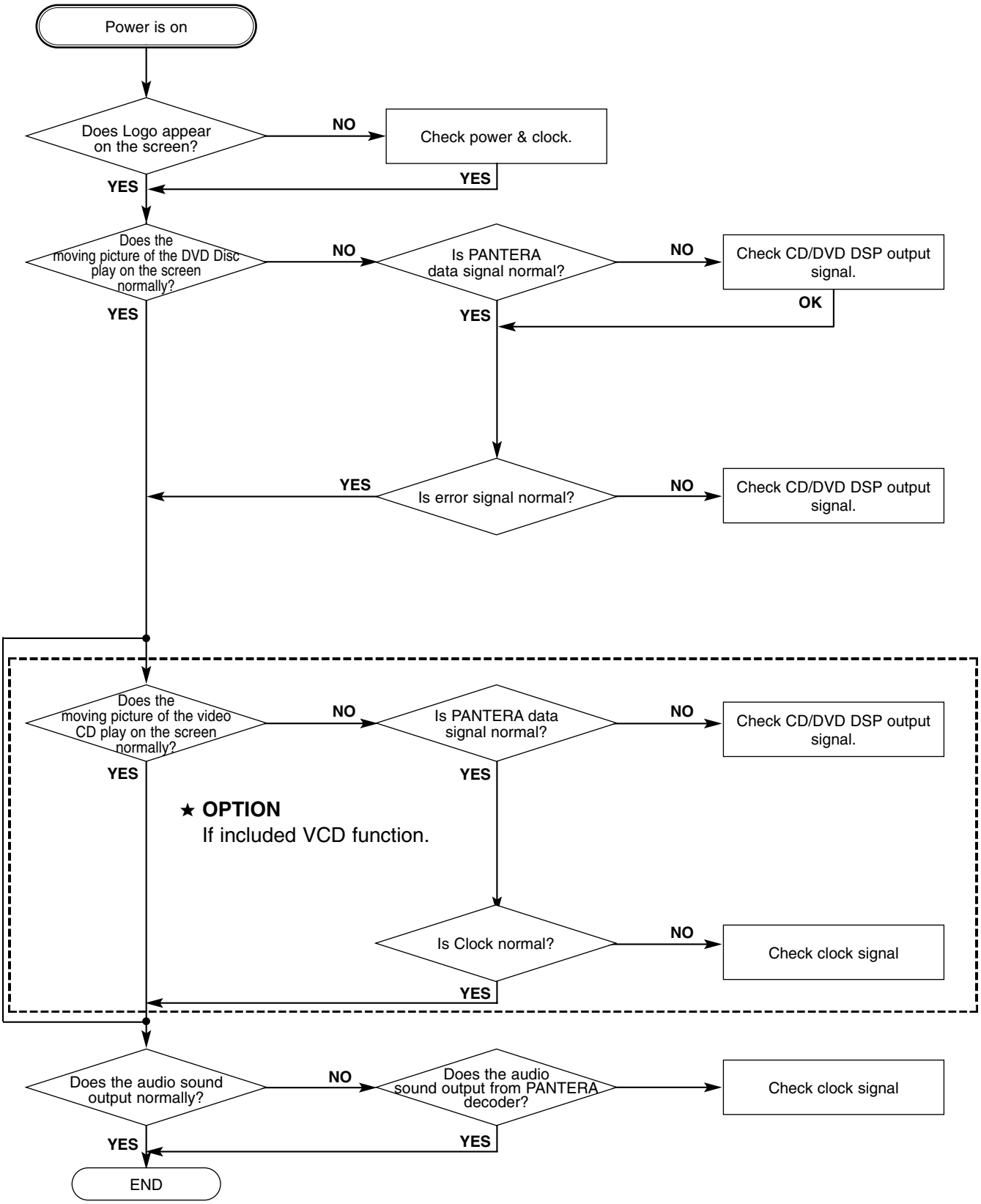
E. Picture abnormal



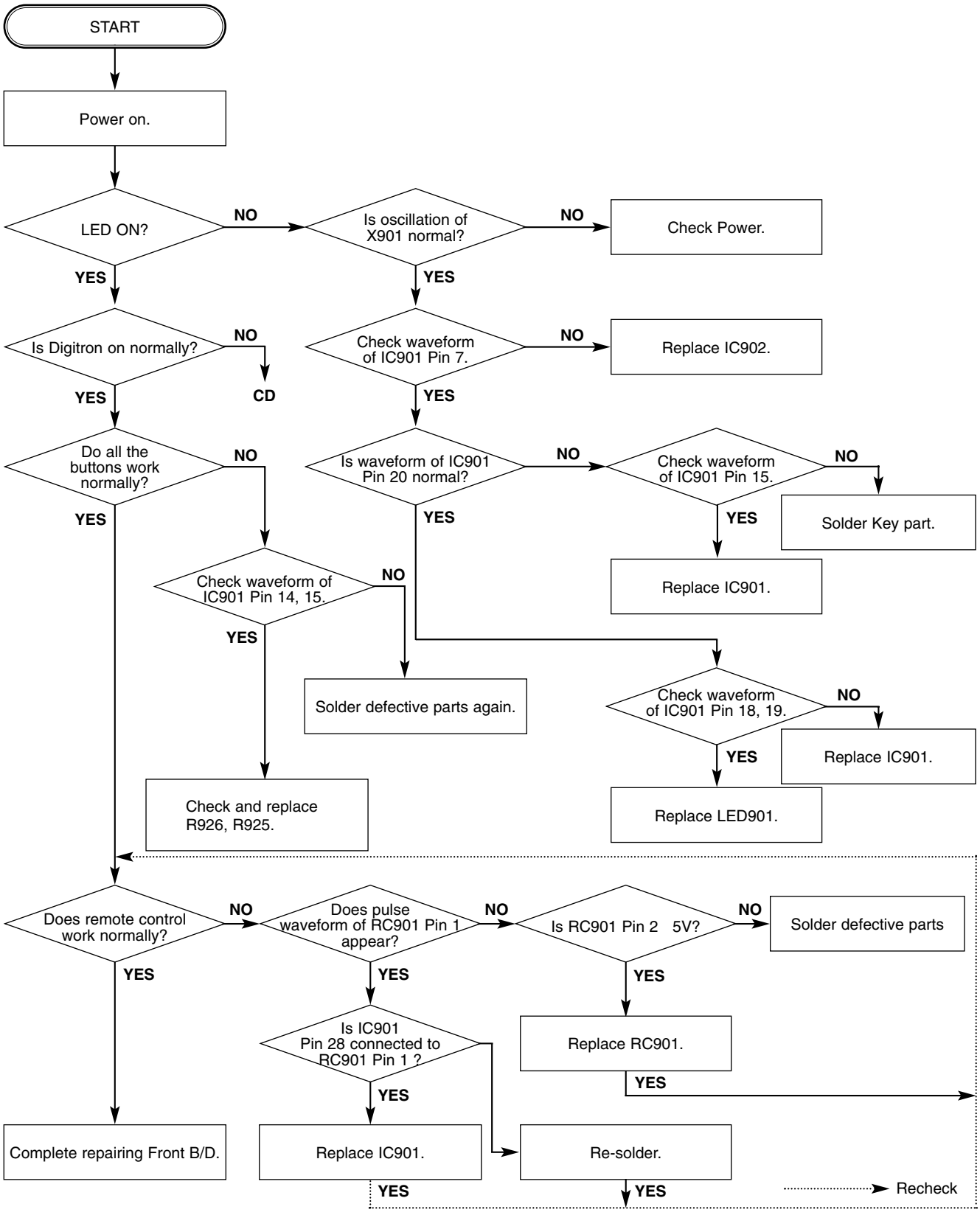
F. Disc Error



3. PANTERA Circuit

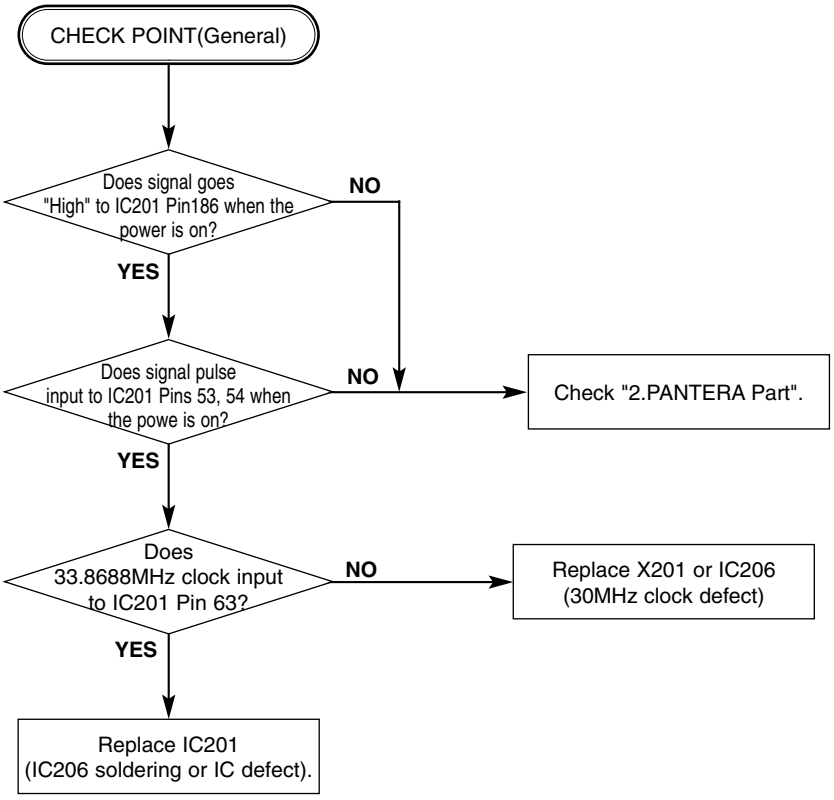


4. Front Circuit (Digitron & key)

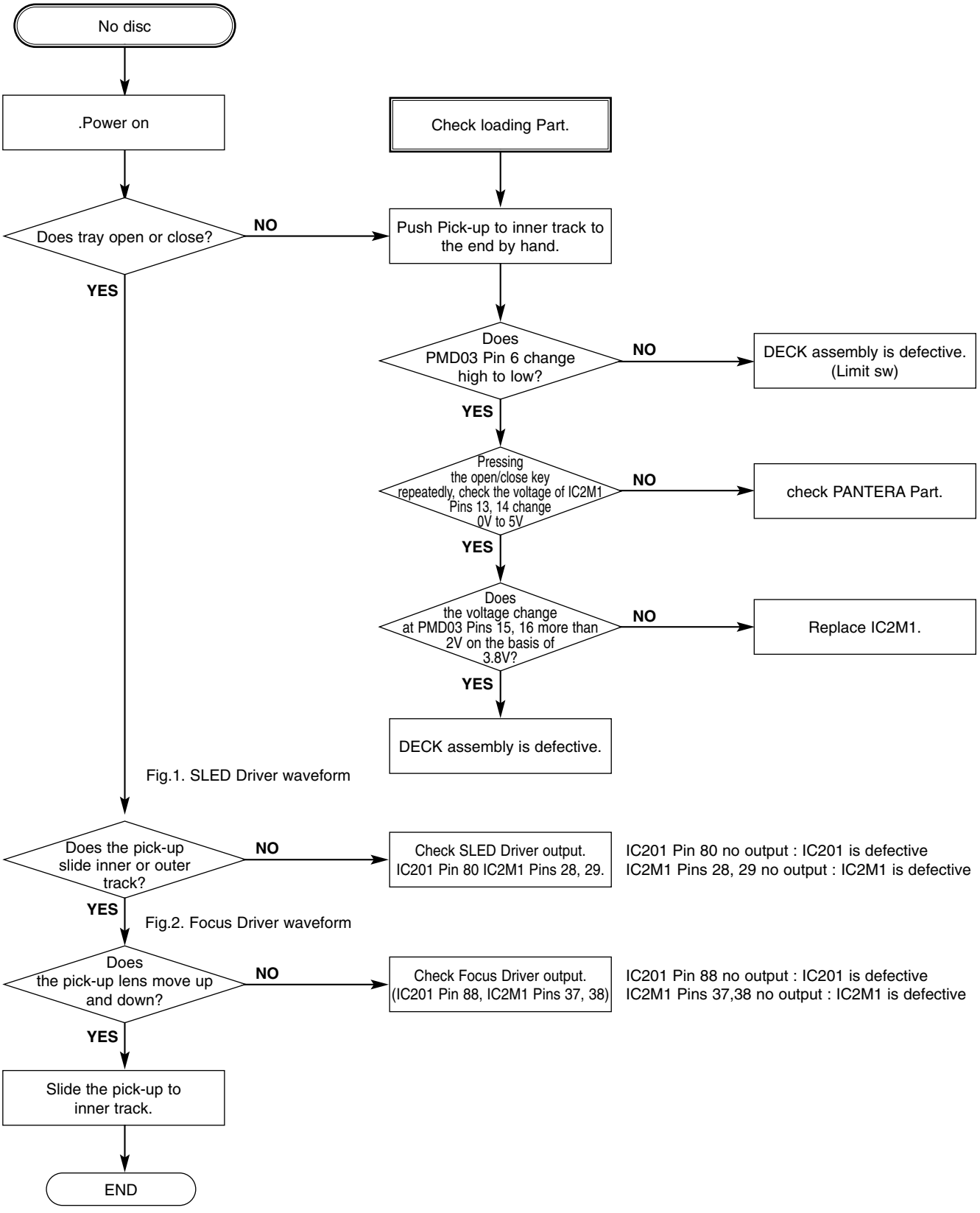


5. RF/Servo Circuit

A.


CHECK POINT(General)
Does signal goes "High" to IC201 Pin186 when the power is on?
NO
YES
Does signal pulse input to IC201 Pins 53, 54 when the powe is on?
NO
Check "2.PANTERA Part".
YES
Does 33.8688MHz clock input to IC201 Pin 63?
NO
Replace X201 or IC206 (30MHz clock defect)
YES
Replace IC201 (IC206 soldering or IC defect).

B.


No disc
.Power on
Does tray open or close?
NO
YES
Check loading Part.
Push Pick-up to inner track to the end by hand.
Does PMD03 Pin 6 change high to low?
NO
DECK assembly is defective. (Limit sw)
YES
Pressing the open/close key repeatedly, check the voltage of IC2M1 Pins 13, 14 change 0V to 5V
NO
check PANTERA Part.
YES
Does the voltage change at PMD03 Pins 15, 16 more than 2V on the basis of 3.8V?
NO
Replace IC2M1.
YES
DECK assembly is defective.
Fig.1. SLED Driver waveform
Does the pick-up slide inner or outer track?
NO
Check SLED Driver output. IC201 Pin 80 IC2M1 Pins 28, 29.
IC201 Pin 80 no output : IC201 is defective
IC2M1 Pins 28, 29 no output : IC2M1 is defective
YES
Fig.2. Focus Driver waveform
Does the pick-up lens move up and down?
NO
Check Focus Driver output. (IC201 Pin 88, IC2M1 Pins 37, 38)
IC201 Pin 88 no output : IC201 is defective
IC2M1 Pins 37,38 no output : IC2M1 is defective
YES
Slide the pick-up to inner track.
END

C.

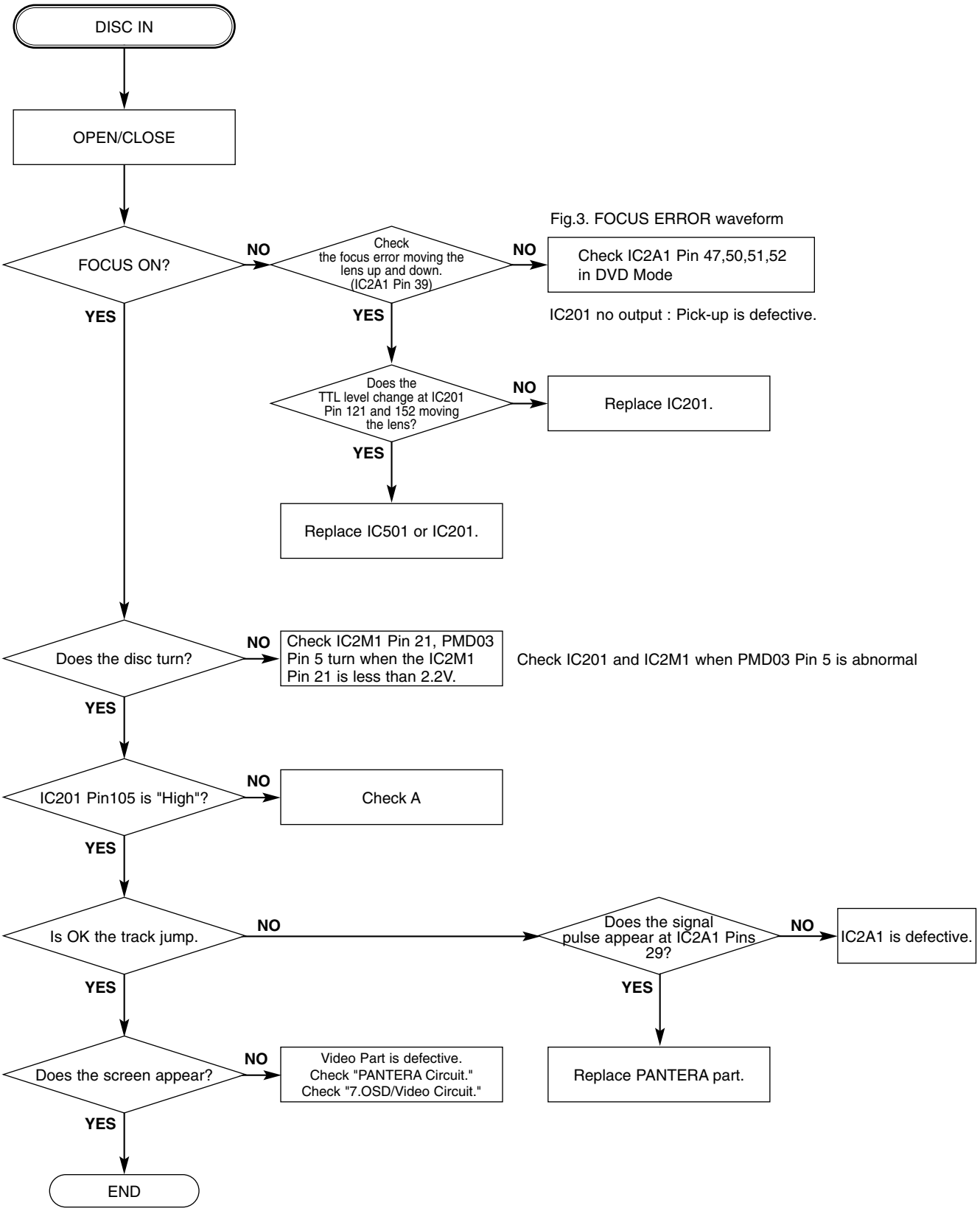
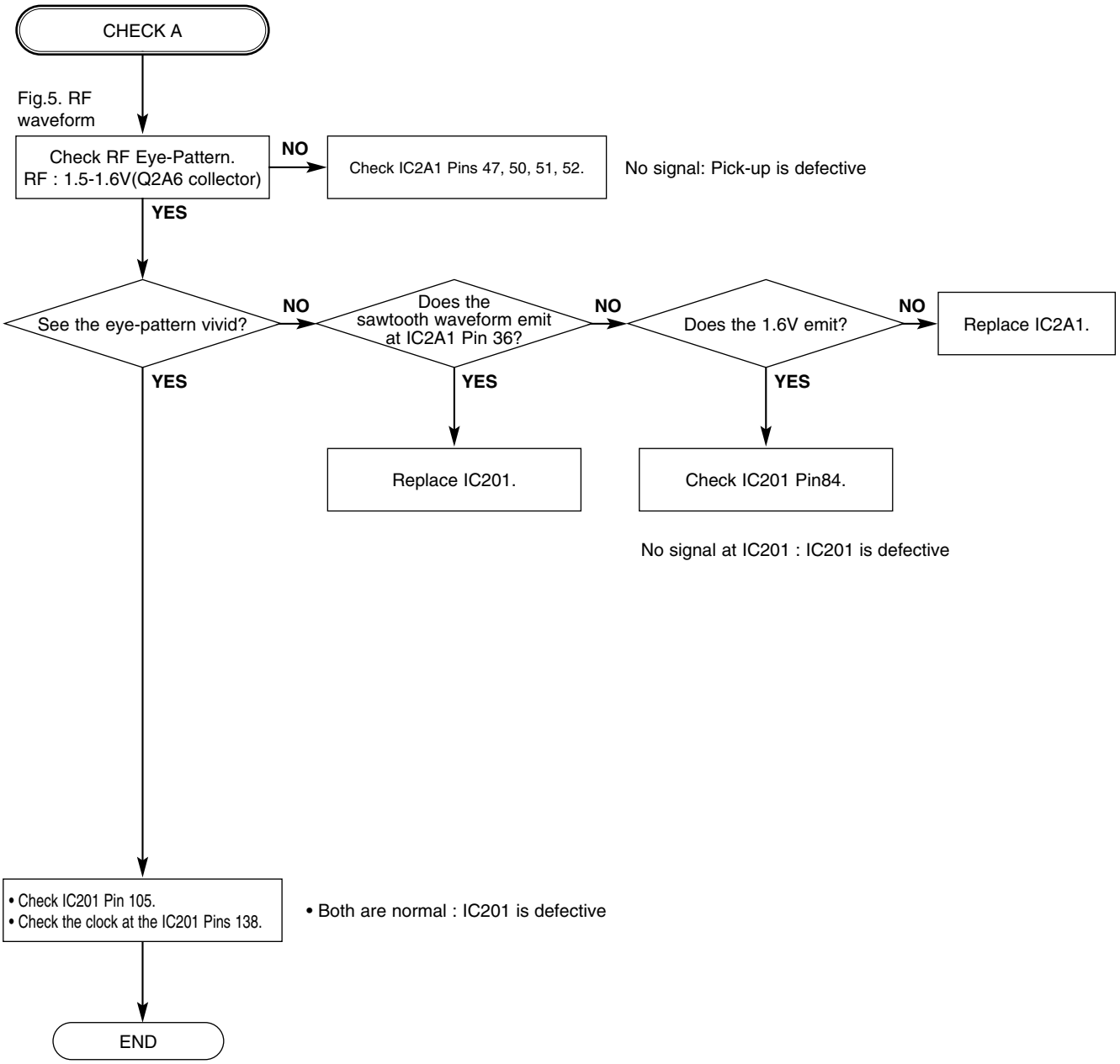


Fig.3. FOCUS ERROR waveform

IC201 no output : Pick-up is defective.

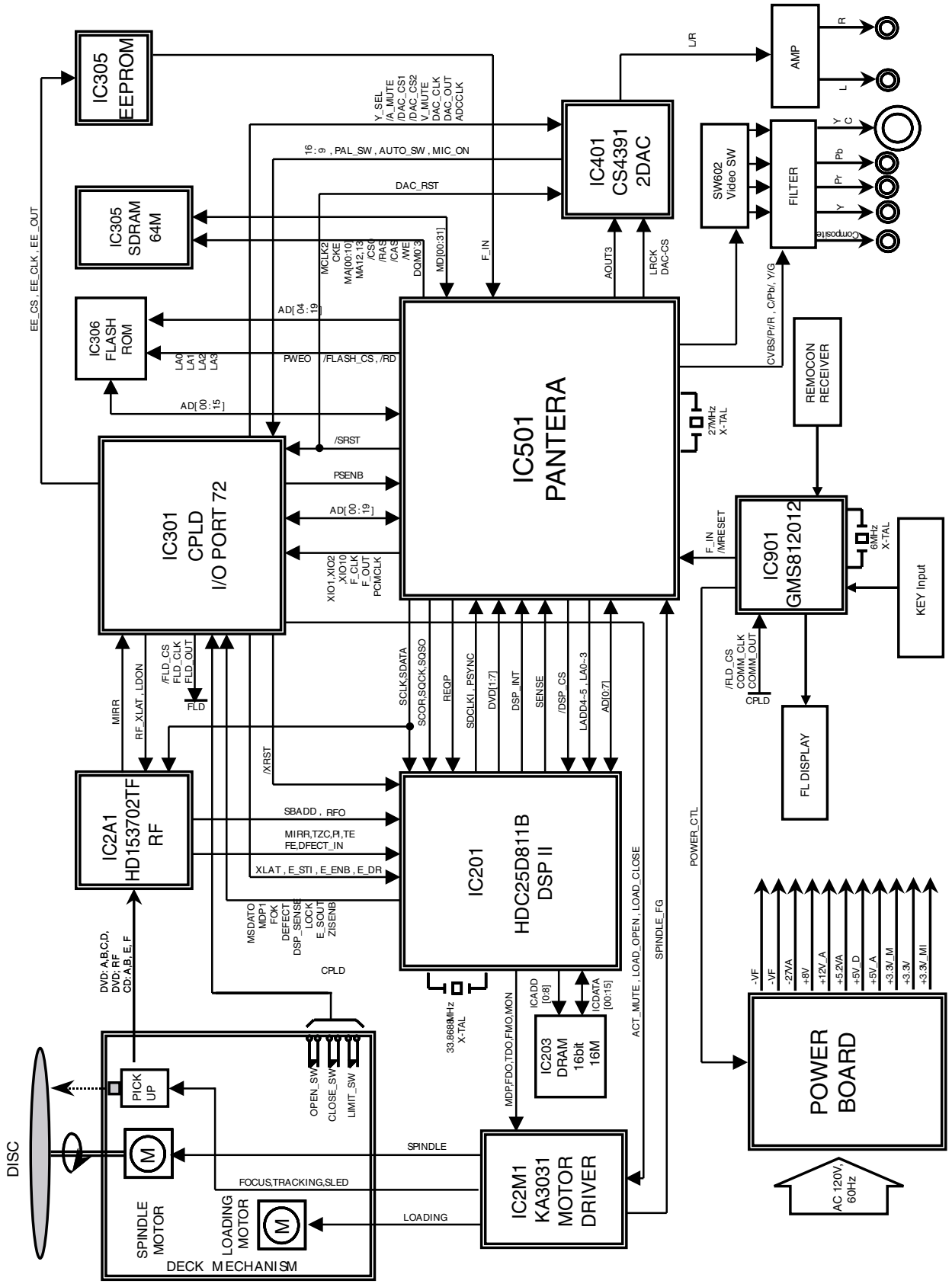
Check IC201 and IC2M1 when PMD03 Pin 5 is abnormal

D.

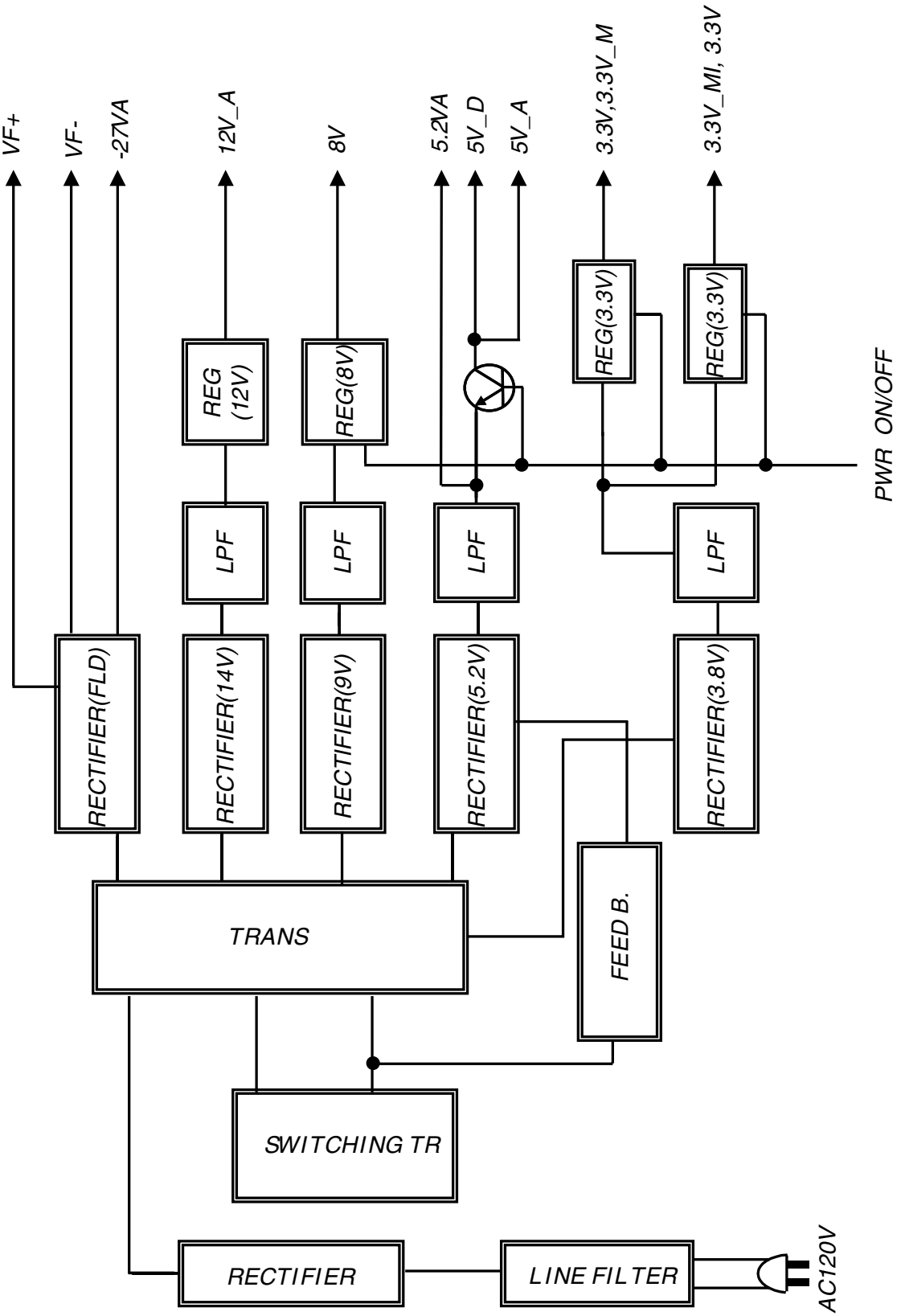

CHECK A
Fig.5. RF waveform
Check RF Eye-Pattern.
RF : 1.5-1.6V(Q2A6 collector)
NO
Check IC2A1 Pins 47, 50, 51, 52.
No signal: Pick-up is defective
YES
See the eye-pattern vivid?
NO
Does the sawtooth waveform emit at IC2A1 Pin 36?
NO
Does the 1.6V emit?
NO
Replace IC2A1.
YES
YES
YES
Replace IC201.
Check IC201 Pin84.
No signal at IC201 : IC201 is defective
• Check IC201 Pin 105.
• Check the clock at the IC201 Pins 138.
• Both are normal : IC201 is defective
END

BLOCK DIAGRAMS

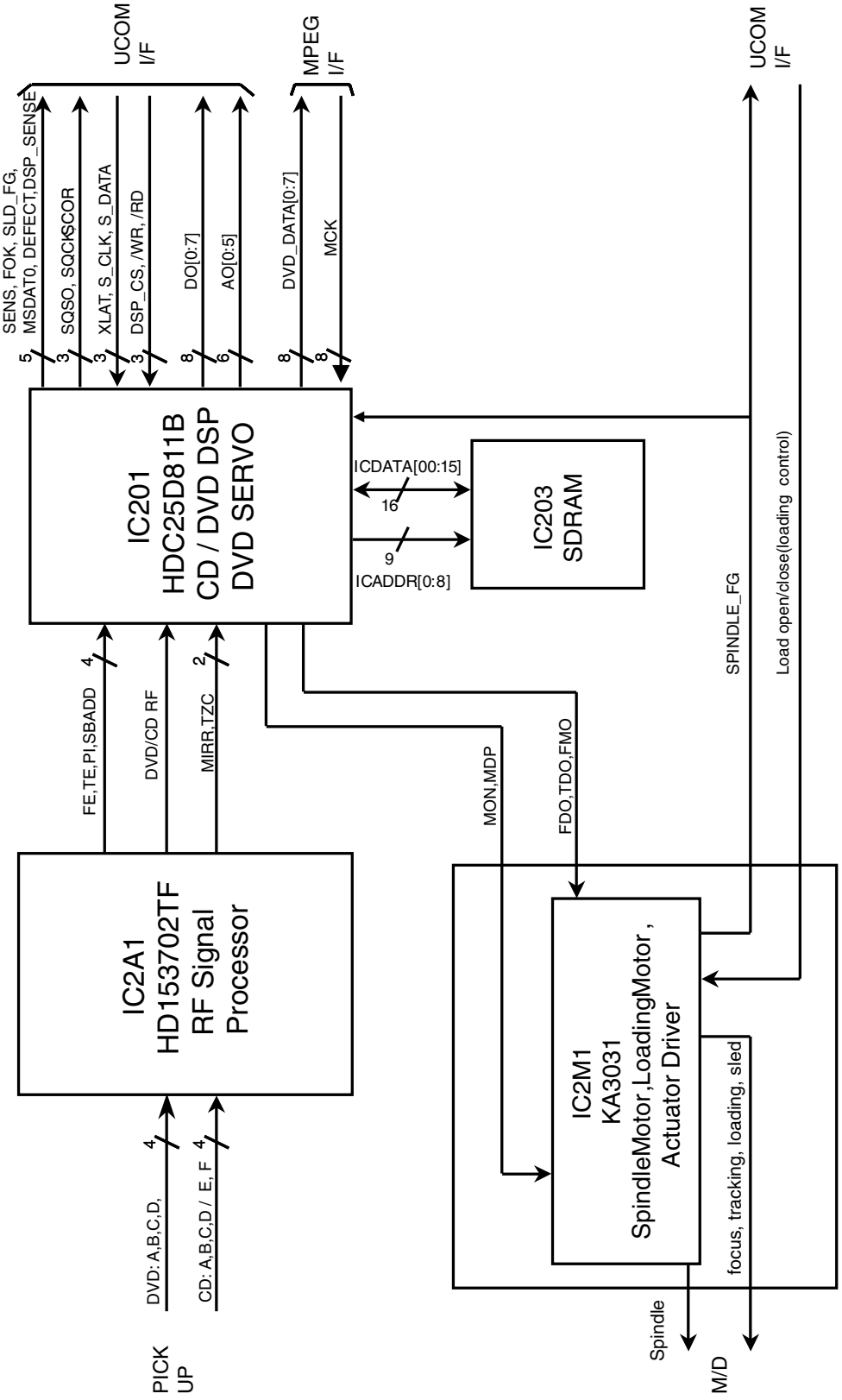
1. Overall Block Diagram



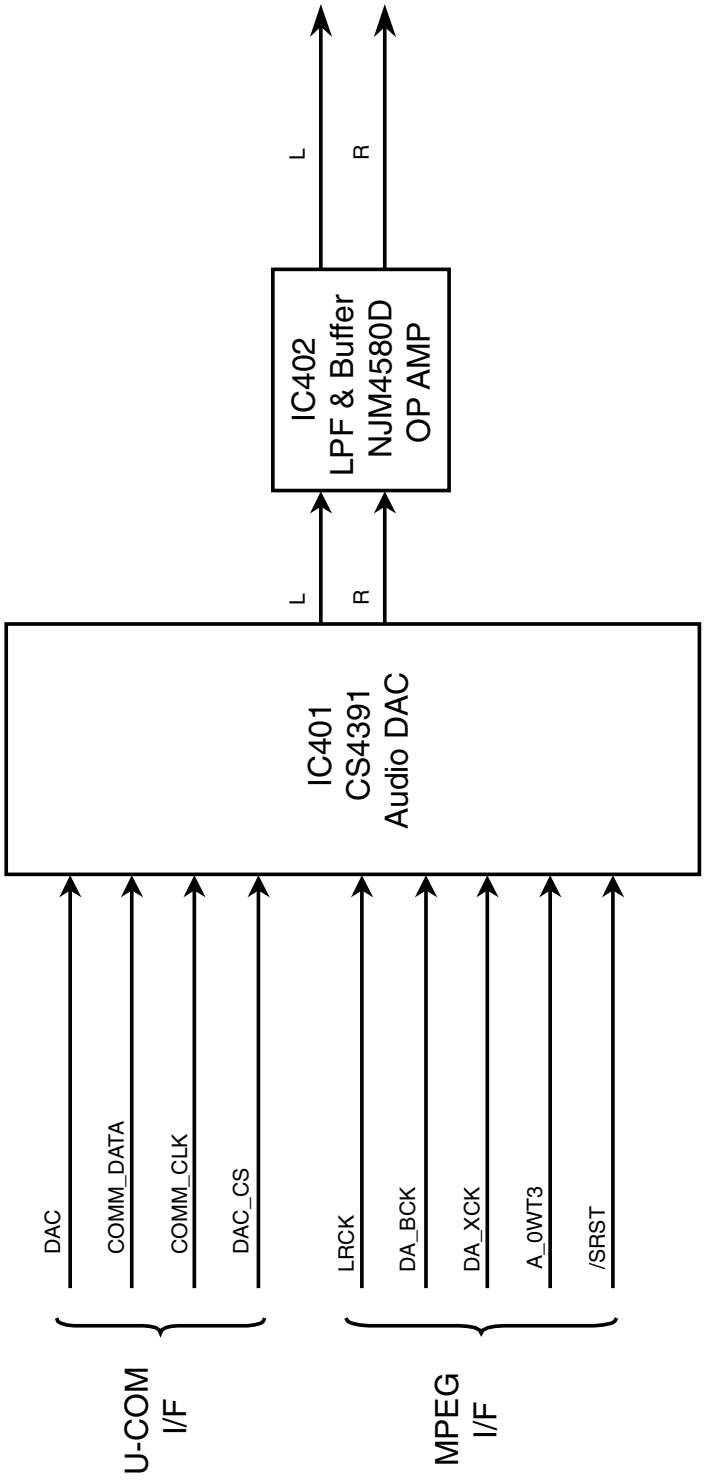
2. Power(SMPS) Block Diagram



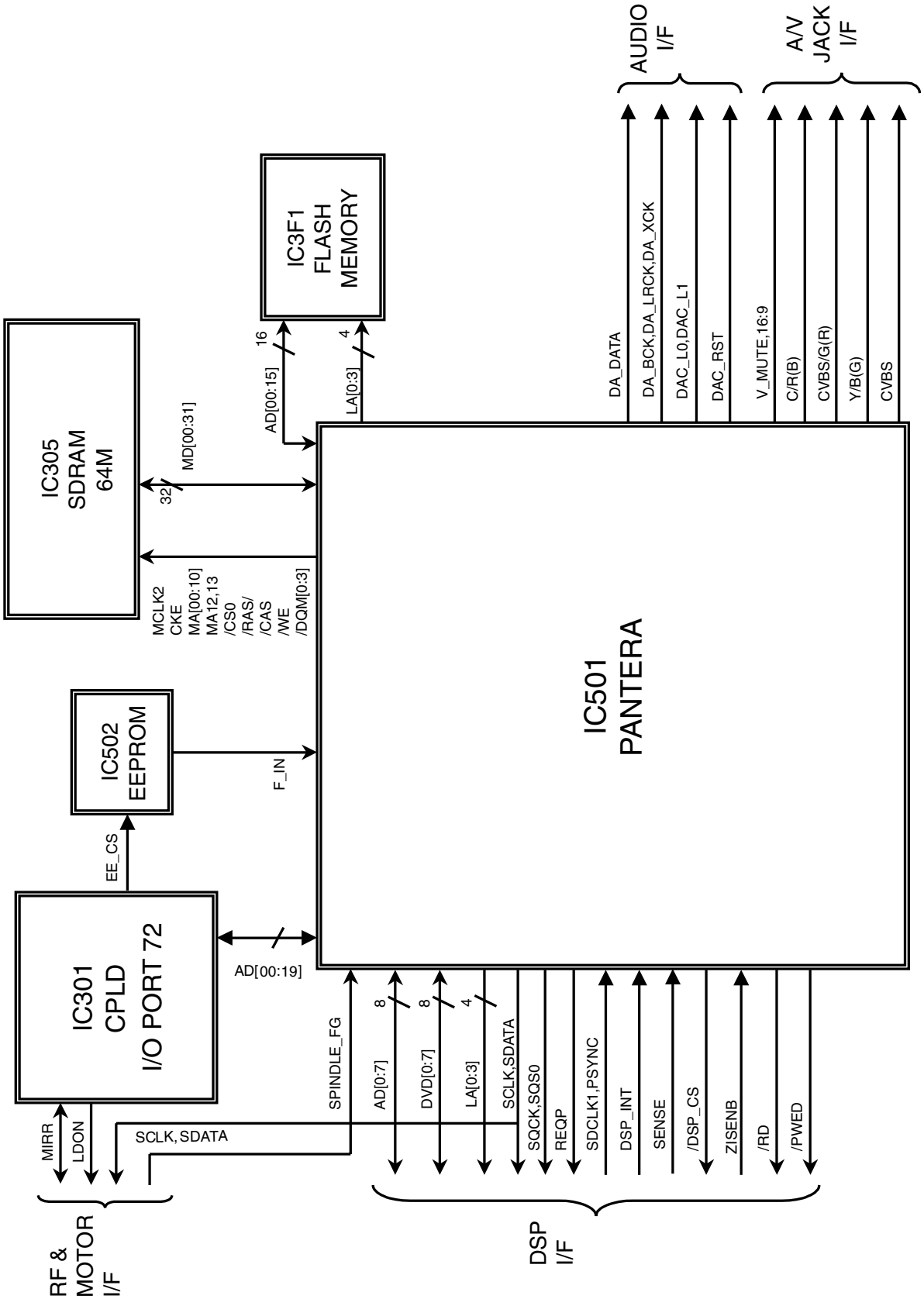
3. RF/CD DSP/DVD DSP/DVD SERVO Block Diagram



4. Audio Block Diagram



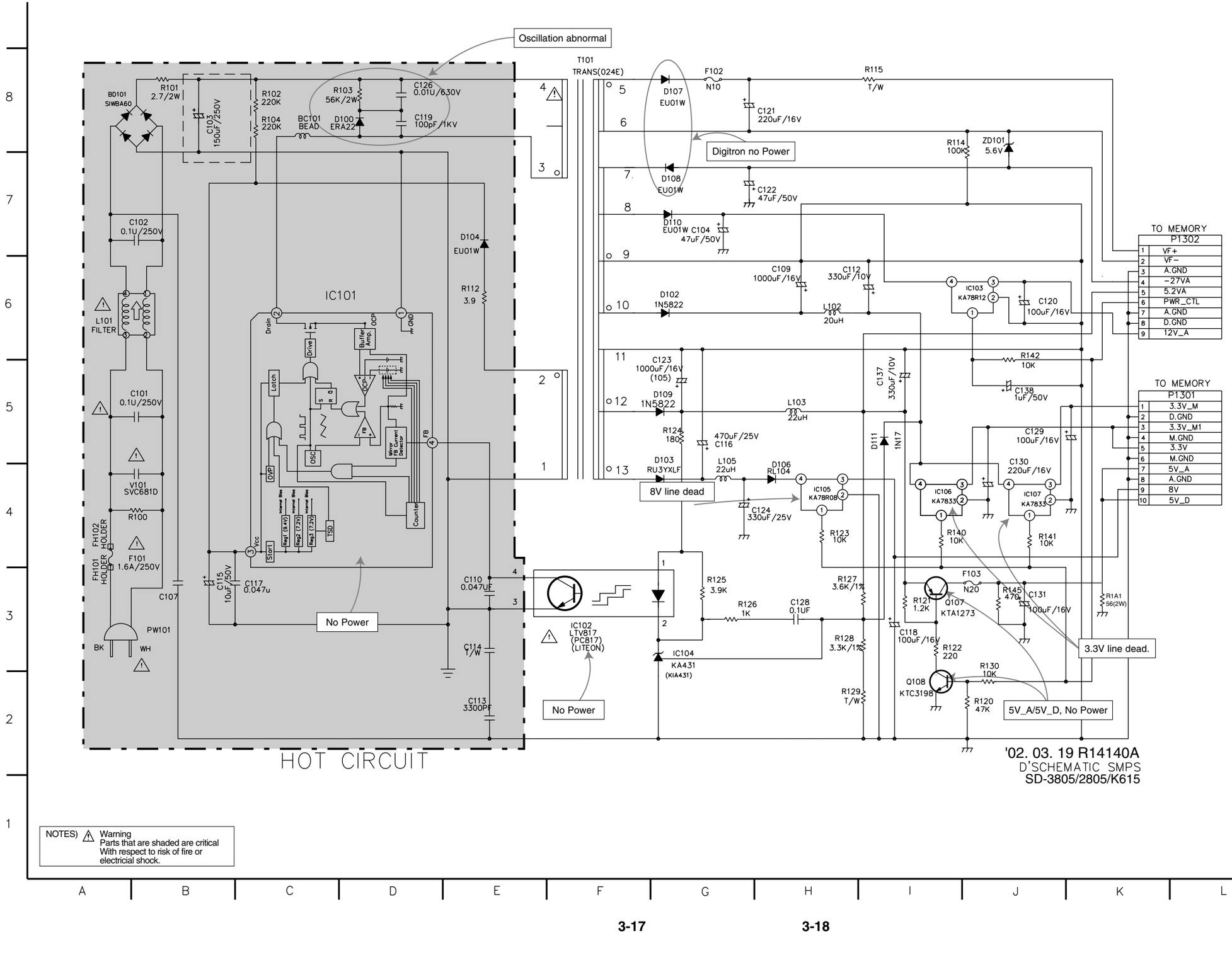
5. MPEG Block Diagram



CIRCUIT DIAGRAM

1. POWER(SMPS) CIRCUIT DIAGRAM

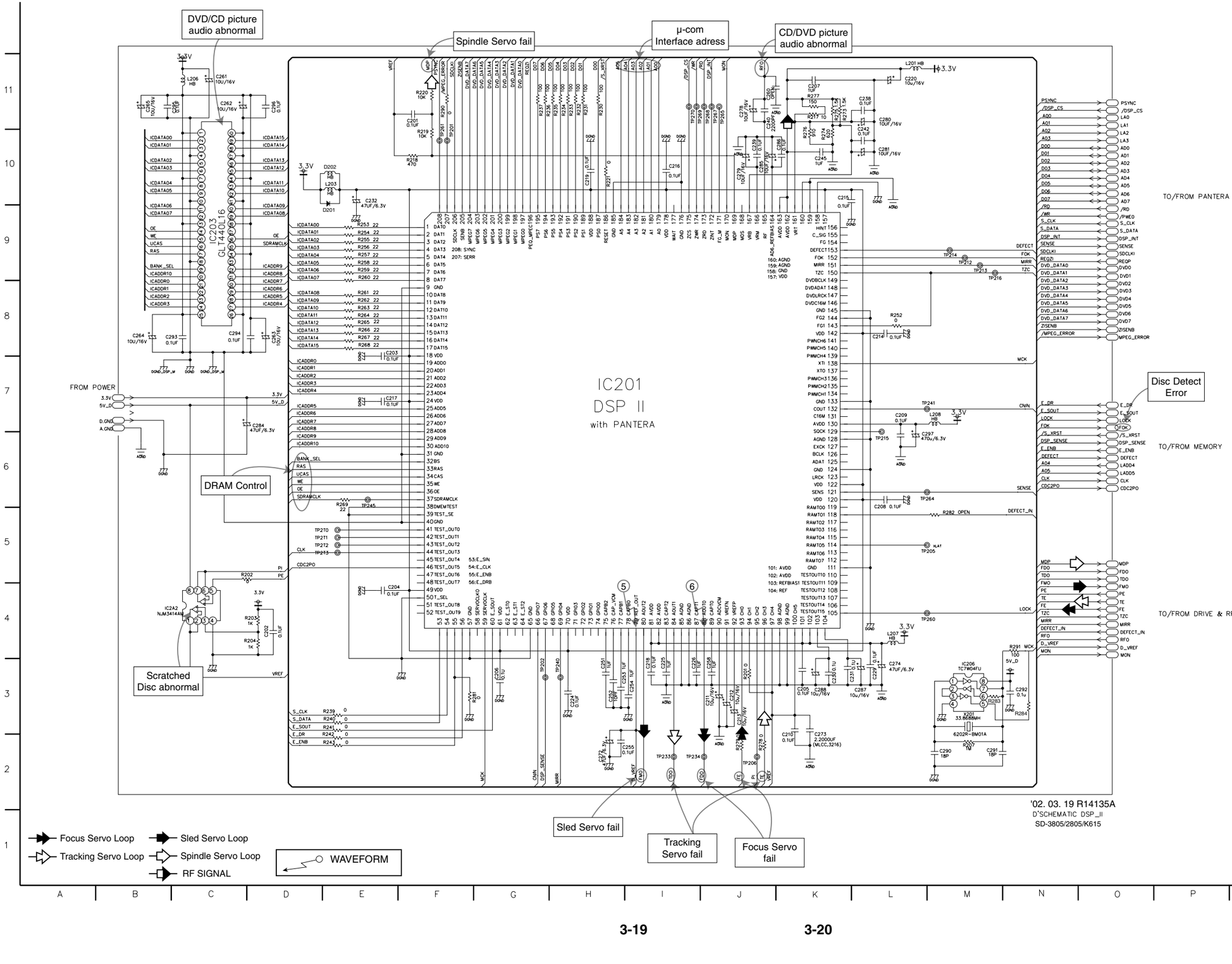
NOTE :
1. Shaded(▩) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.



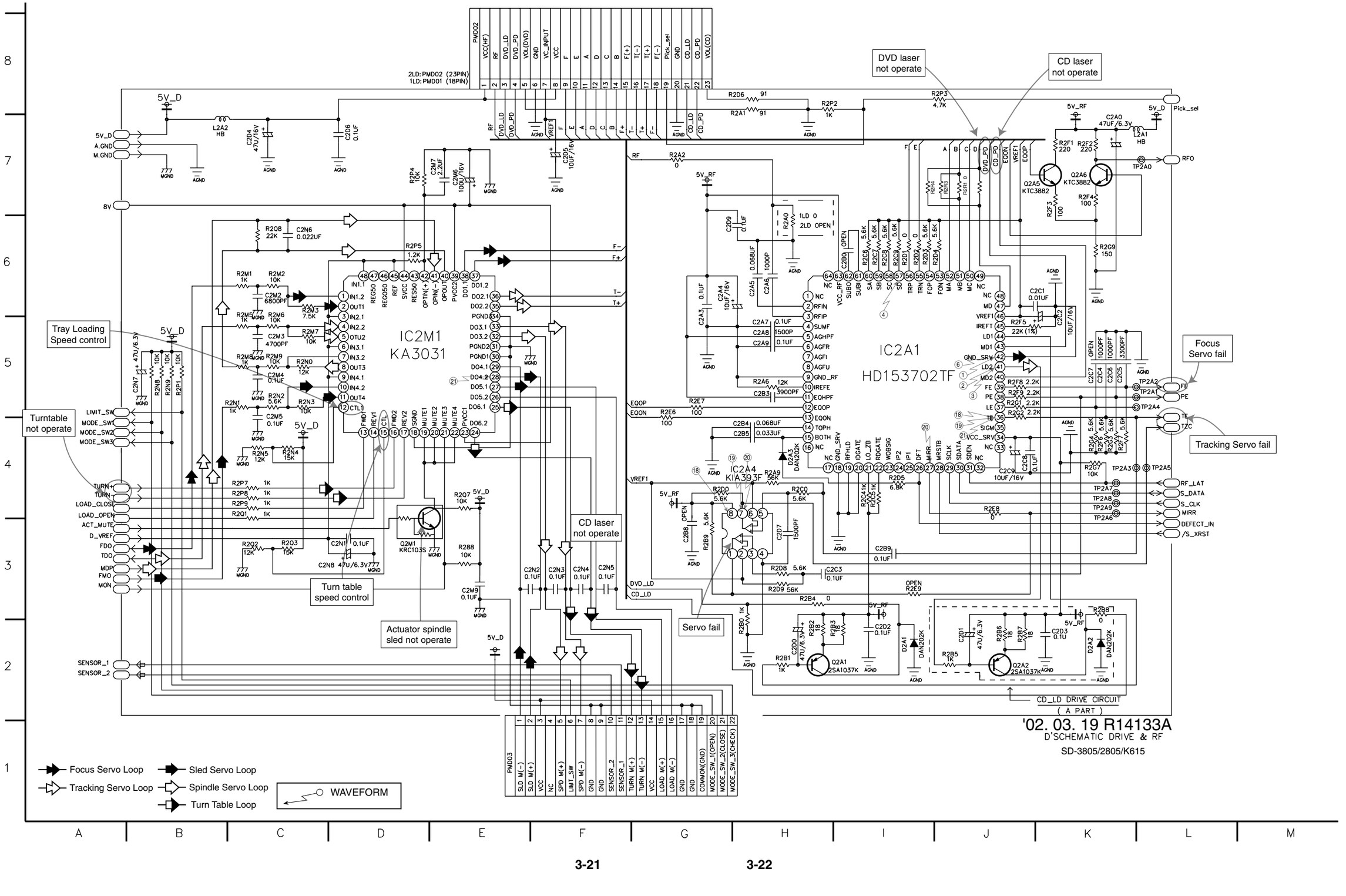
LOCATION GUIDE

BC101	C8
BD101	A8
C101	B5
C102	A7
C103	B8
C104	G7
C107	B3
C109	H6
C110	E3
C112	H6
C113	E2
C114	E3
C115	B3
C116	G5
C117	C3
C118	I3
C119	D8
C120	J6
C121	H8
C122	H7
C123	G5
C124	G4
C126	D8
C128	H3
C129	J5
C130	J4
C131	J3
C137	I5
C138	J5
D100	C8
D102	G6
D103	G5
D104	E7
D106	H4
D107	G8
D108	G7
D109	G5
D110	G7
D111	I5
F102	G8
F103	J3
FH101	A3
FH102	A4
IC101	C6
IC102	F3
IC103	J6
IC104	G3
IC105	H4
IC106	I4
IC107	J4
L101	A6
L102	H6
L103	H5
L105	G5
P1301	K5
P1302	L7
PW101	B3
Q107	I3
Q108	I2
R100	A4
R101	B8
R102	C8
R103	C8
R104	C8
R112	E6
R114	I8
R115	I8
R120	J2
R121	I3
R122	I3
R123	H4
R124	G5
R125	G3
R126	G3
R127	H3
R128	H3
R129	H2
R130	J3
R140	I4
R141	J4
R142	J6
R145	J3
T101	F8
V101	A4
ZD101	J8

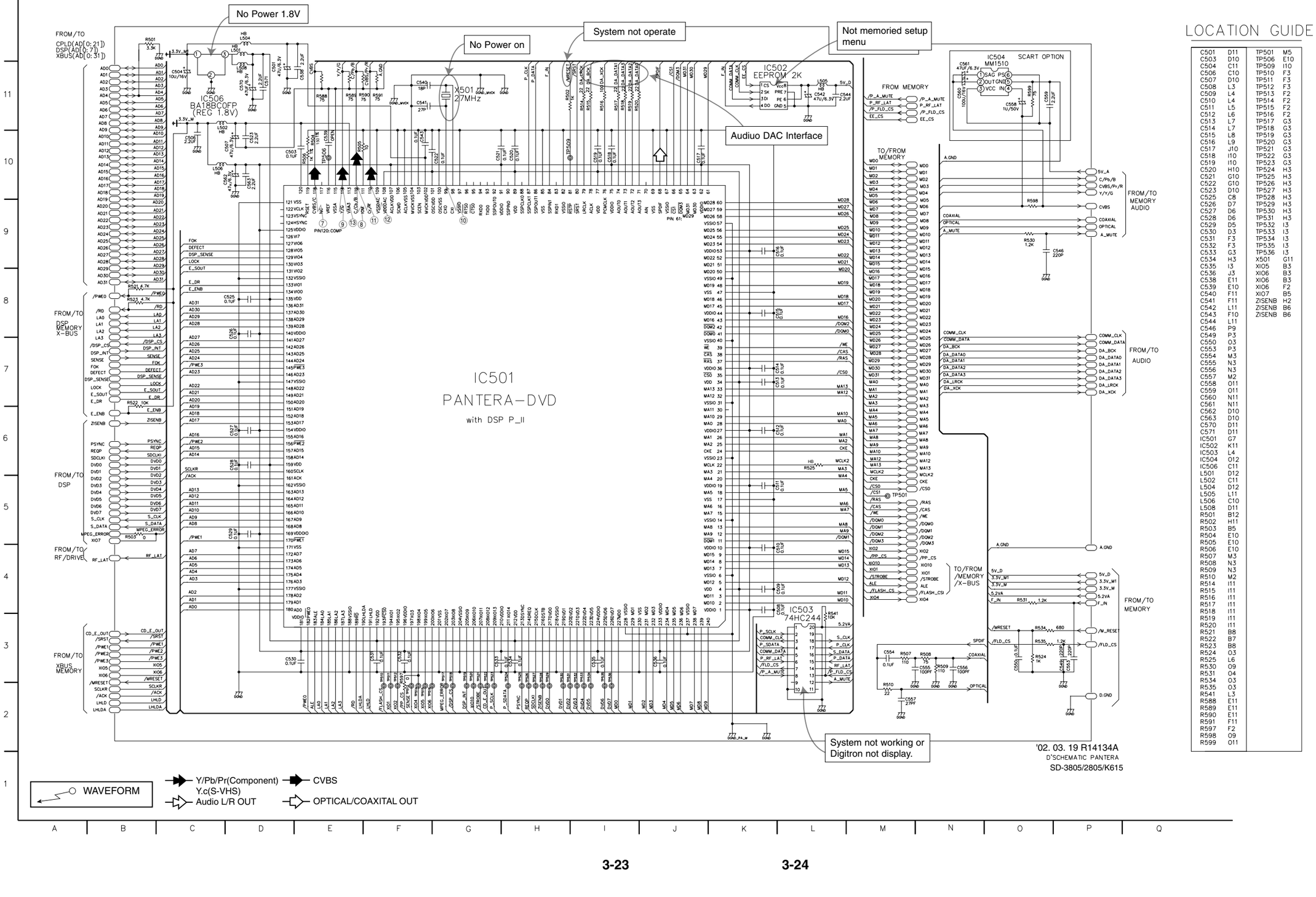
2. DVD DSP CIRCUIT DIAGRAM



3. DRIVE & RF CIRCUIT DIAGRAM



4. PANTERA CIRCUIT DIAGRAM

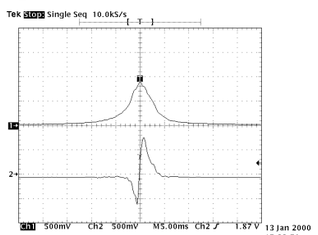


LOCATION GUIDE

C501	D11	TP501	M5
C503	D10	TP506	E10
C504	C11	TP509	I10
C506	C10	TP510	F3
C507	D10	TP511	F3
C508	L3	TP512	F3
C509	L4	TP513	F2
C510	L4	TP514	F2
C511	L5	TP515	F2
C512	L6	TP516	F2
C513	L7	TP517	G3
C514	L7	TP518	G3
C515	L8	TP519	G3
C516	L9	TP520	G3
C517	J10	TP521	G3
C518	I10	TP522	G3
C519	I10	TP523	G3
C520	H10	TP524	H3
C521	G10	TP525	H3
C522	G10	TP526	H3
C523	D10	TP527	H3
C525	C8	TP528	H3
C526	D7	TP529	H3
C527	D6	TP530	H3
C528	D6	TP531	H3
C529	D5	TP532	I3
C530	D3	TP533	I3
C531	F3	TP534	I3
C532	F3	TP535	I3
C533	G3	TP536	I3
C534	H3	X501	G11
C535	I3	XIO5	B3
C536	J3	XIO6	B3
C538	E11	XIO6	B3
C539	E10	XIO6	F2
C540	F11	XIO7	B5
C541	F11	ZISENB	H2
C542	L11	ZISENB	B6
C543	F10	ZISENB	B6
C544	L11		
C546	P9		
C549	P3		
C550	O3		
C553	P3		
C554	M3		
C555	N3		
C556	N3		
C557	M2		
C558	O11		
C559	O11		
C560	N11		
C561	N11		
C562	D10		
C563	D10		
C570	D11		
C571	D11		
IC501	G7		
IC502	K11		
IC503	L4		
IC504	O12		
IC506	C11		
L501	D12		
L502	C11		
L504	D12		
L505	L11		
L506	C10		
L508	D11		
R501	B12		
R502	H11		
R503	B5		
R504	E10		
R505	E10		
R506	E10		
R507	M3		
R508	N3		
R509	N3		
R510	M2		
R514	I11		
R515	I11		
R516	I11		
R517	I11		
R518	I11		
R519	I11		
R520	I11		
R521	B8		
R522	B7		
R523	B8		
R524	O3		
R525	L6		
R530	O9		
R531	O4		
R534	O3		
R535	O3		
R541	L3		
R588	E11		
R589	E11		
R590	E11		
R591	F11		
R597	F2		
R598	O9		
R599	O11		

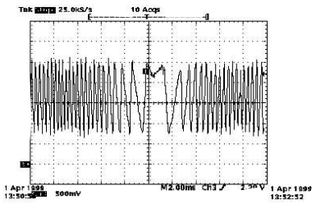
• WAVEFORMS

①



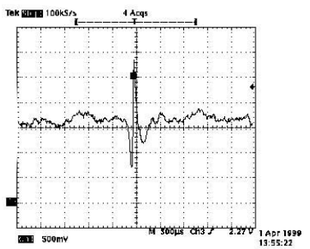
IC2A1 Pin 42, Focus Error

②



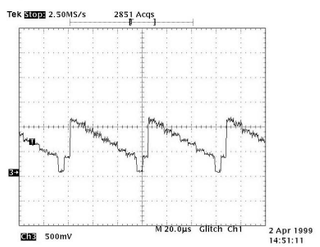
IC2A1 Pin 41
Tracking Error

③



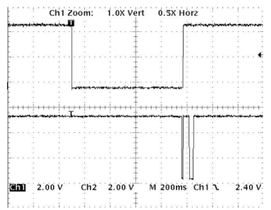
IC2A1 Pin 41
VBR TRACKING Error

⑬



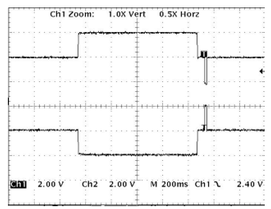
IC501 Pin 114
Component Y

⑭



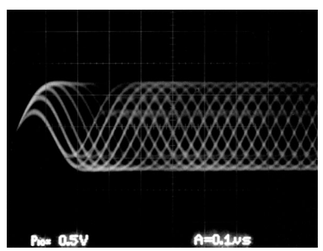
TURN(+)(-) Signal from µ-com

⑮



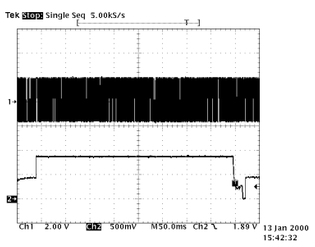
TURN(+)(-) from Motor Drive
Forward turn

④



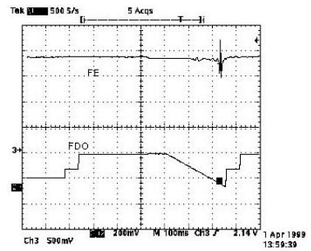
IC2A1 Pin 57,
RF

⑤



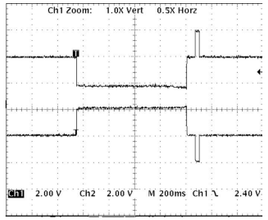
IC201 Pin 88, SLED Drive(FMO)

⑥



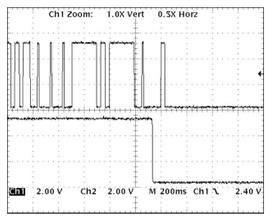
IC2A1 Pin42, Focus Error(in Focus Search)
IC201 Pin 83, Focus Drive(FDO)

⑯



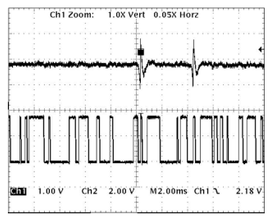
TURN(+)(-) from Motor Drive
Reverse turn, IC301 6, 8

⑰



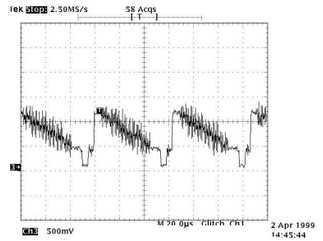
Sensor 1 (disc position)
Sensor 2 (disc ready),
IC301 78,89

⑱



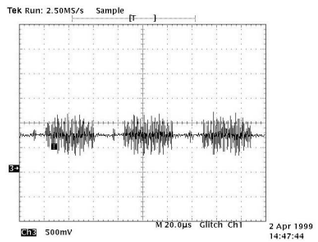
TE/TZC After tracking
servo ON (Play mode),
IC2A1 36, IC2A4 7

⑦



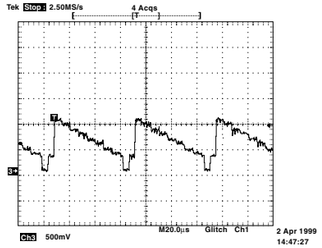
IC501 Pin 118, Composite

⑧



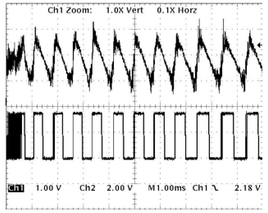
IC501 Pin 112, Chrominance
(Super video out Mode)

⑨



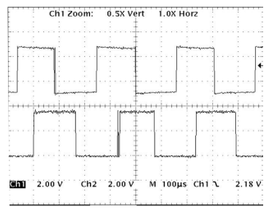
IC501 Pin 114, Luminance
(Super video out Mode)

⑲



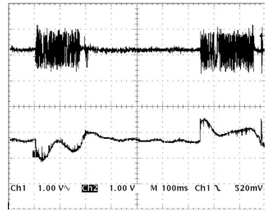
TE/TZC Before tracking
servo ON

⑳



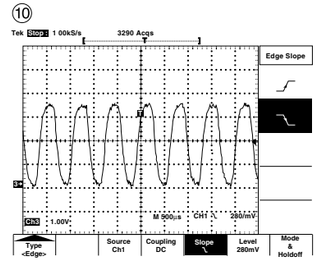
TZC/MIRR (Search mode)
IC2A4 7, IC2A1 27

㉑



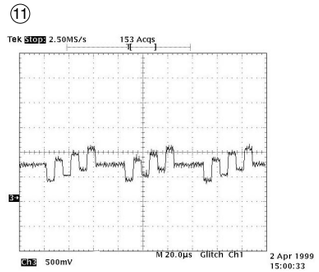
TE/SLD(+) Search mode
(outter ⇒ inner),
IC2A1 36, IC2M1 28

⑩



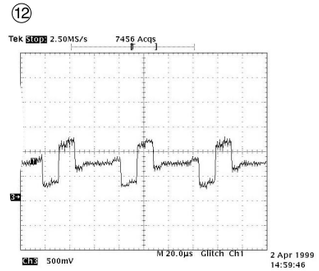
IC501 Pin 99,
PANTER MAIN

⑪



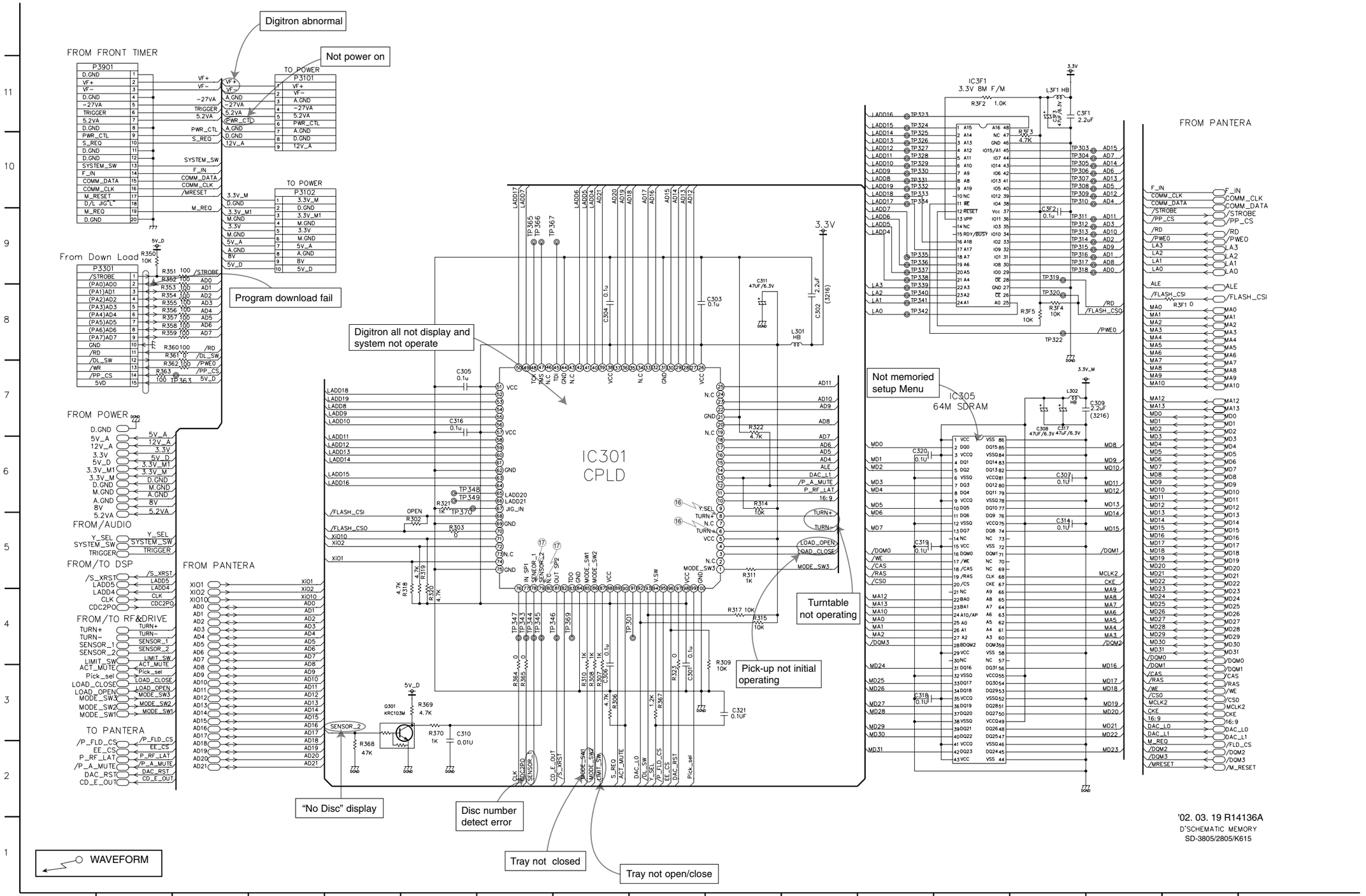
IC501 Pin 112
Component Pb

⑫

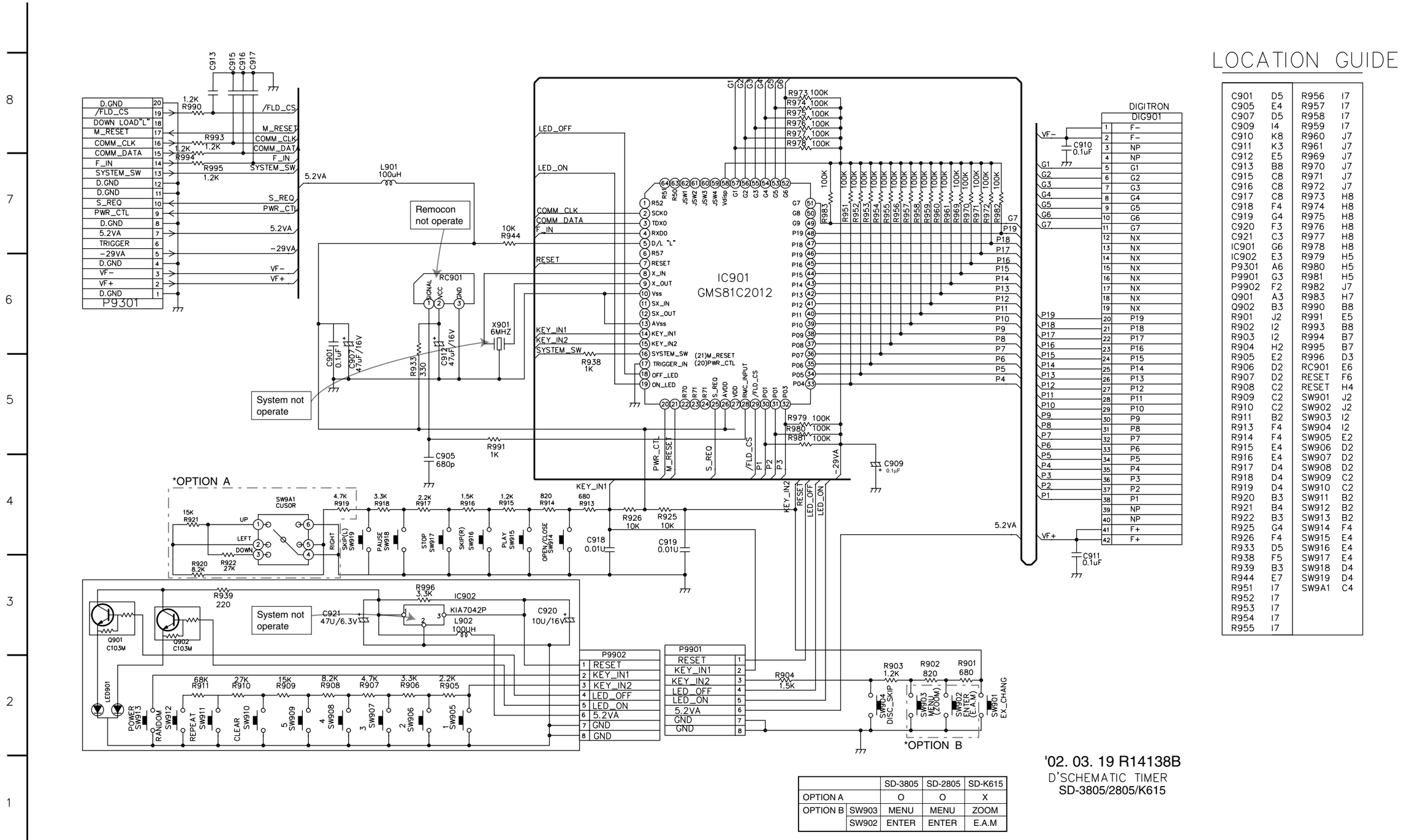


IC501 Pin 110
Component Pr

5. MEMORY CIRCUIT DIAGRAM



6. TIMER & KEY CIRCUIT DIAGRAM



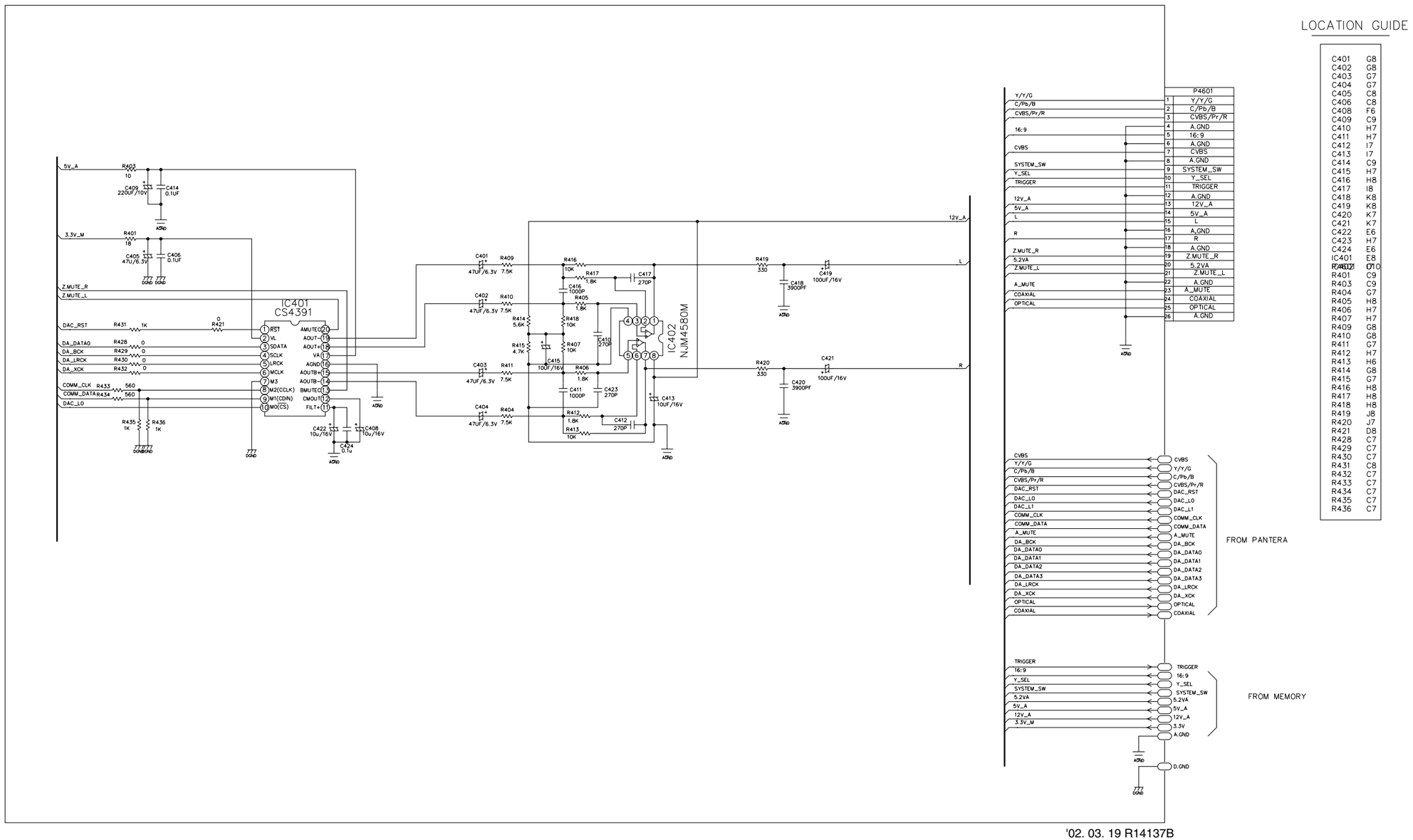
		SD-3805	SD-2805	SD-K615
OPTION A		O	O	X
OPTION B	SW903	MENU	MENU	ZOOM
	SW902	ENTER	ENTER	E.A.M

'02. 03. 19 R14138B
D'SCHEMATIC TIMER
SD-3805/2805/K615

LOCATION GUIDE

C901	D5	R956	I7
C905	E4	R957	I7
C907	D5	R958	I7
C909	I4	R959	I7
C910	K8	R960	J7
C911	K3	R961	J7
C912	E5	R969	J7
C913	B8	R970	J7
C915	C8	R971	J7
C916	C8	R972	J7
C917	C8	R973	H8
C918	F4	R974	H8
C919	G4	R975	H8
C920	F3	R976	H8
C921	C3	R977	H8
IC901	G6	R978	H8
IC902	E3	R979	H5
P9301	A6	R980	H5
P9901	G3	R981	H5
P9902	F2	R982	J7
Q901	A3	R983	H7
Q902	B3	R990	B8
R901	J2	R991	E5
R902	I2	R993	B8
R903	I2	R994	B7
R904	H2	R995	B7
R905	E2	R996	D3
R906	D2	RC901	E6
R907	D2	RESET	F6
R908	C2	RESET	H4
R909	C2	SW901	J2
R910	C2	SW902	J2
R911	B2	SW903	I2
R913	F4	SW904	I2
R914	F4	SW905	E2
R915	E4	SW906	D2
R916	E4	SW907	D2
R917	D4	SW908	D2
R918	D4	SW909	C2
R919	D4	SW910	C2
R920	B3	SW911	B2
R921	B4	SW912	B2
R922	B3	SW913	B2
R925	G4	SW914	F4
R926	F4	SW915	E4
R933	D5	SW916	E4
R938	F5	SW917	E4
R939	B3	SW918	D4
R944	E7	SW919	D4
R951	I7	SW9A1	C4
R952	I7		
R953	I7		
R954	I7		
R955	I7		

7. A/V CIRCUIT DIAGRAM



LOCATION GUIDE

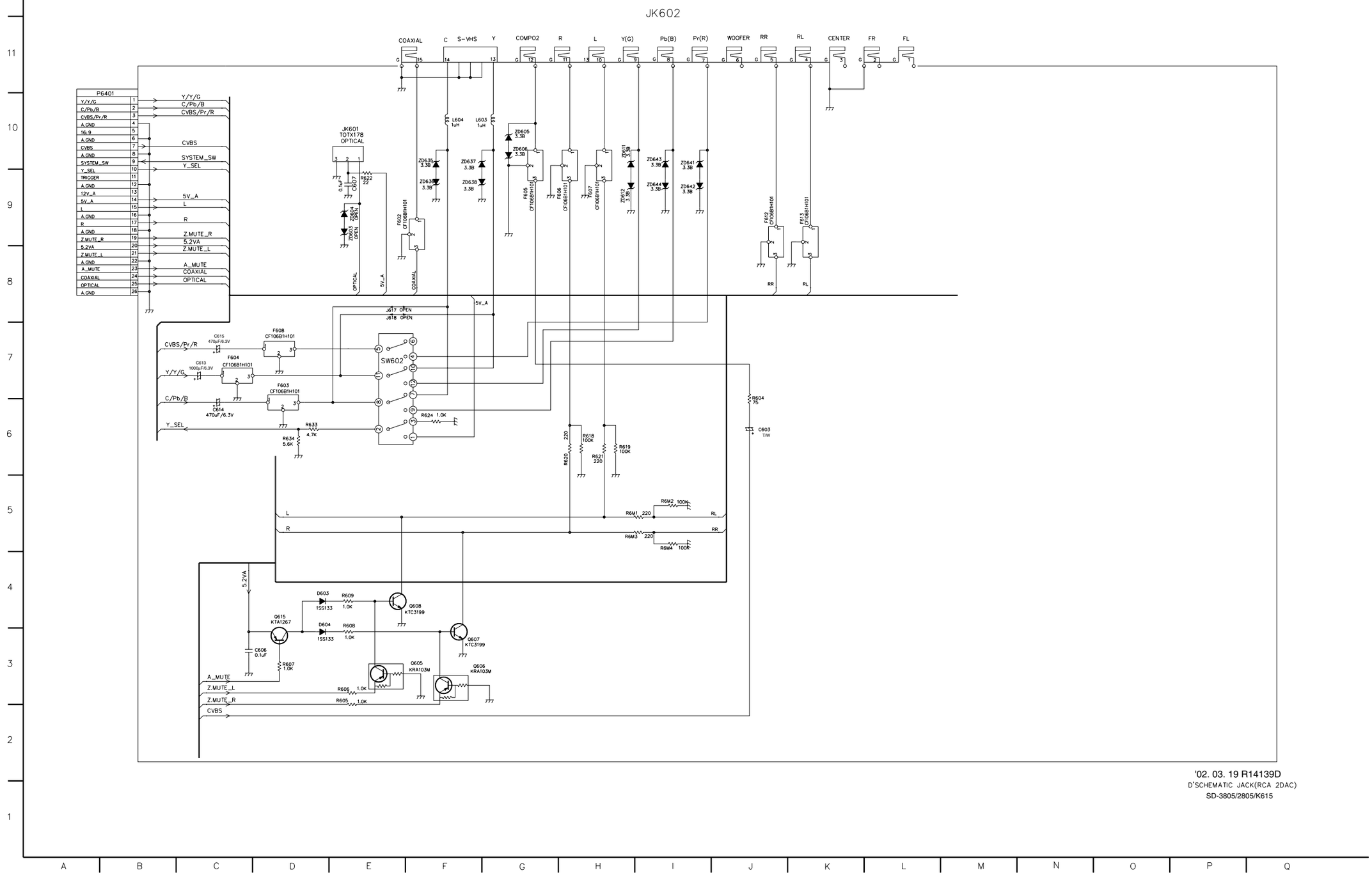
C401	G8
C402	G8
C403	G7
C404	G7
C405	C8
C406	C8
C408	F6
C409	C9
C410	H7
C411	H7
C412	I7
C413	I7
C414	C9
C415	H7
C416	H8
C417	I8
C418	K8
C419	K8
C420	K7
C421	K7
C422	E6
C423	H7
C424	E6
IC401	E8
R400	D10
R401	C9
R403	C9
R404	G7
R405	H8
R406	H7
R407	H7
R409	G8
R410	G8
R411	G7
R412	H7
R413	H6
R414	G8
R415	G7
R416	H8
R417	H8
R418	H8
R419	J8
R420	J7
R421	D8
R428	C7
R429	C7
R430	C7
R431	C8
R432	C7
R433	C7
R434	C7
R435	C7
R436	C7

'02. 03. 19 R14137B

D'SCHEMATIC AUDIO(2 DAC)

SD-3805/2805/K615

8. JACK CIRCUIT DIAGRAM



'02. 03. 19 R14139D
D'SCHEMATIC JACK(RCA 2DAC)
SD-3805/2805/K615

• CIRCUIT VOLTAGE CHART

MODE / PIN NO.	LEVEL(V)
PANTERA	
IC501	
1	3.18
2	1.3
3	1.4
4	1.8
5	1.5
6	0
7	1.5
8	1.4
9	1.6
10	3.1
11	0.7
12	0.15
13	0.15
14	0
15	0
16	1.7
17	1.4
18	0
19	1.5
20	1.6
21	0
22	1.6
23	0
24	3.1
25	1.7
26	1.4
27	3.1
28	1.5
29	0.15
30	
31	0
32	0.7
33	1.5
34	1.8
35	2
36	3.1
37	2.9
38	2.2
39	2.9
40	0
41	0
42	0
43	1.6
44	3.1
45	1.6
46	1.5
47	0
48	1.4
49	0
50	1.5
51	1.7
52	1.2
53	3.1

MODE / PIN NO.	LEVEL(V)
54	1.6
55	1.4
56	1.5
57	0
58	1.6
59	1.4
60	1.5
61	1.4
62	3.1
63	1
64	1.5
65	0.005
66	0.5
67	0.003
68	1.58
69	0
70	3.1
71	1.2
72	1.2
73	1.2
74	1.2
75	3.1
76	1.65
77	1.8
78	1.5
79	1.5
80	3.1
81	3.1
82	0.001
83	3.1
84	3.7
85	0
86	
87	3.1
88	3.1
89	1.8
90	0.004
91	3.1
92	0
93	
94	
95	
96	
97	0
98	
99	
100	0
101	1.8
102	3.1
103	0
104	0
105	0
106	0
107	2.1
108	2.1

MODE / PIN NO.	LEVEL(V)
109	0
110	0.8
111	0.9
112	1.3
113	3.1
114	0.78
115	0
116	1.26
117	
118	0.08
119	1.2
120	2
121	0
122	3.1
123	3.1
124	3.1
125	3.1
126	
127	
128	
129	
130	
131	
132	0
133	
134	
135	1.8
136	
137	3.1
138	3.1
139	3.1
140	3.1
141	3.1
142	3.1
143	3.1
144	3.1
145	3.1
146	3.1
147	0
148	3.1
149	3.1
150	3.1
151	3.1
152	3.1
153	3.1
154	3.1
155	3.1
156	3.1
157	3.1
158	3.1
159	1.8
160	1.5
161	3.1
162	
163	0

MODE / PIN NO.	LEVEL(V)
164	3.1
165	3.1
166	3.1
167	3.1
168	3.1
169	3.1
170	3.1
171	0
172	3.1
173	3.1
174	3.1
175	1.5
176	3.1
177	0
178	3.1
179	3.1
180	3.1
181	3.1
182	3.18
183	0.086
184	3
185	2.4
186	2.3
187	0
188	0
189	3.1
190	0
191	0.017
192	1.8
193	3.1
194	3.1
195	0
196	3.18
197	1.3
198	3.1
199	3.1
200	3.1
201	0
202	2.3
203	3.1
204	0.001
205	3.1
206	3.1
207	3.1
208	1.6
209	3.1
210	3.18
211	0.018
212	1.8
213	3.19
214	2.69
215	1.5
216	2.9
217	2.59
218	0

MODE / PIN NO.	LEVEL(V)
219	2.29
220	2.08
221	2.29
222	2.29
223	2.49
224	3.1
225	2.39
226	2.45
227	1.5
228	0
229	1.52
230	0
231	1.61
232	1.6
233	3.1
234	1.6
235	1.6
236	1.5
237	0
238	1.6
239	1.4
240	1.5

MODE / PIN NO.	LEVEL(V)
MEMORY	
IC301	
1	4.4
2	0
3	0
4	0
5	3.2
6	0
7	0
8	0
9	0
10	0
11	0
12	3.2
13	3.2
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	3.2
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	2.2
35	0
36	0
37	0
38	3.2
39	0
40	0
41	0
42	0
43	2.2
44	0
45	3.2
46	2.4
47	3.2
48	2.3
49	0
50	0
51	3.2
52	1.7
53	3.1

MODE / PIN NO.	LEVEL(V)
54	0
55	0
56	0
57	3.2
58	0
59	0
60	0
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	3.2
69	0
70	3.2
71	3.2
72	0
73	0
74	3.2
75	0
76	1.5
77	0
78	4.4
79	0
80	0
81	0
82	3.2
83	0
84	0
85	3.2
86	0
87	4.4
88	3.2
89	2.6
90	3.2
91	3.2
92	3.2
93	3.2
94	0
95	3
96	0
97	3.2
98	3.2
99	4.7
100	0

MODE / PIN NO.	LEVEL(V)
DSP	
IC201	
1	3
2	3
3	3
4	3
5	3
6	3
7	3
8	3
9	0
10	3.08~3.1
11	2.97~3.1
12	3~3.1
13	3~3.1
14	3~3.1
15	3~3.1
16	3~3.1
17	3~3.1
18	3.24
19	0.2~0.3
20	0.3
21	0.41~1
22	0.41~1
23	0.41~1
24	3.24
25	0.4~1
26	0.4~1
27	0.4~1
28	0.4~1
29	0.4~1
30	0.4~1
31	0
32	3~3.1
33	3~3.1
34	3~3.1
35	3~3.1
36	0
37	1.597
38	0
39	0
40	12.3mV
41	3.24
42	3.24
43	3.24
44	0.5~1.6
45	0.5~1.6
46	0.5~1.6
47	0.15~1
48	0
49	3.2
50	0
51	0.3~1
52	0.2~1
53	0

MODE / PIN NO.	LEVEL(V)
54	5.19
55	0
56	0
57	0
58	1.698
59	1.97
60	0
61	3.24
62	0
63	3.24
64	0
65	0
66	0
67	0
68	3.24
69	0
70	3.25
71	0
72	3.24
73	0
74	0
75	0.8
76	2mV~1.459
77	0.795
78	0.795
79	2.17
80	2.13
81	3.27
82	0
83	1.99
84	2.19
85	0
86	0
87	1.989
88	2.08
89	1.987
90	1.645
91	0.834
92	2.43
93	1.628
94	1.648
95	2.42
96	1.636
97	1.649
98	0
99	0
100	1.649
101	3.28
102	3.27
103	2.05
104	2.07
105	1.2~1.39
106	3.23
107	0
108	3.24

MODE / PIN NO.	LEVEL(V)
109	3.24
110	0
111	0
112	0
113	0
114	0
115	0
116	0
117	0
118	0
119	0
120	3.23
121	1.59~1.63
122	3.23
123	3.23
124	0
125	3.24
126	3.23
127	0
128	0
129	3.28
130	3.28
131	3.28
132	0
133	0
134	3.24
135	3.24
136	0
137	1.699
138	1.906
139	0
140	0
141	0
142	3.23
143	2.48~2.17
144	0
145	0
146	0
147	0
148	0
149	172mV
150	2.47~2.56
151	0
152	3.23
153	0
154	1.58~1.62
155	0
156	3.23
157	3.23
158	0
159	0
160	0
161	2.72
162	3.27
163	3.27

MODE / PIN NO.	LEVEL(V)
164	2.08
165	2.15
166	2.16
167	1.636
168	0
169	2.04
170	0
171	0
172	3.15
173	3.25
174	3.26
175	3.25
176	0
177	3.24
178	3.24
179	2.27~1.97
180	0.22~0.18
181	1~1.3
182	0
183	0
184	0
185	0
186	3.26
187	1.3~1.27
188	3.25
189	1.58
190	1.53
191	1.52
192	0
193	0.52
194	1.5~1.6
195	0.63~0.68
196	2.7~2.8
197	2.7~2.8
198	185mV~1V
199	2.4~2.9
200	17mV~1V
201	17mV~1V
202	17mV~1V
203	17mV~1V
204	17mV~1V
205	2.8
206	1.618
207	3.23
208	3.23

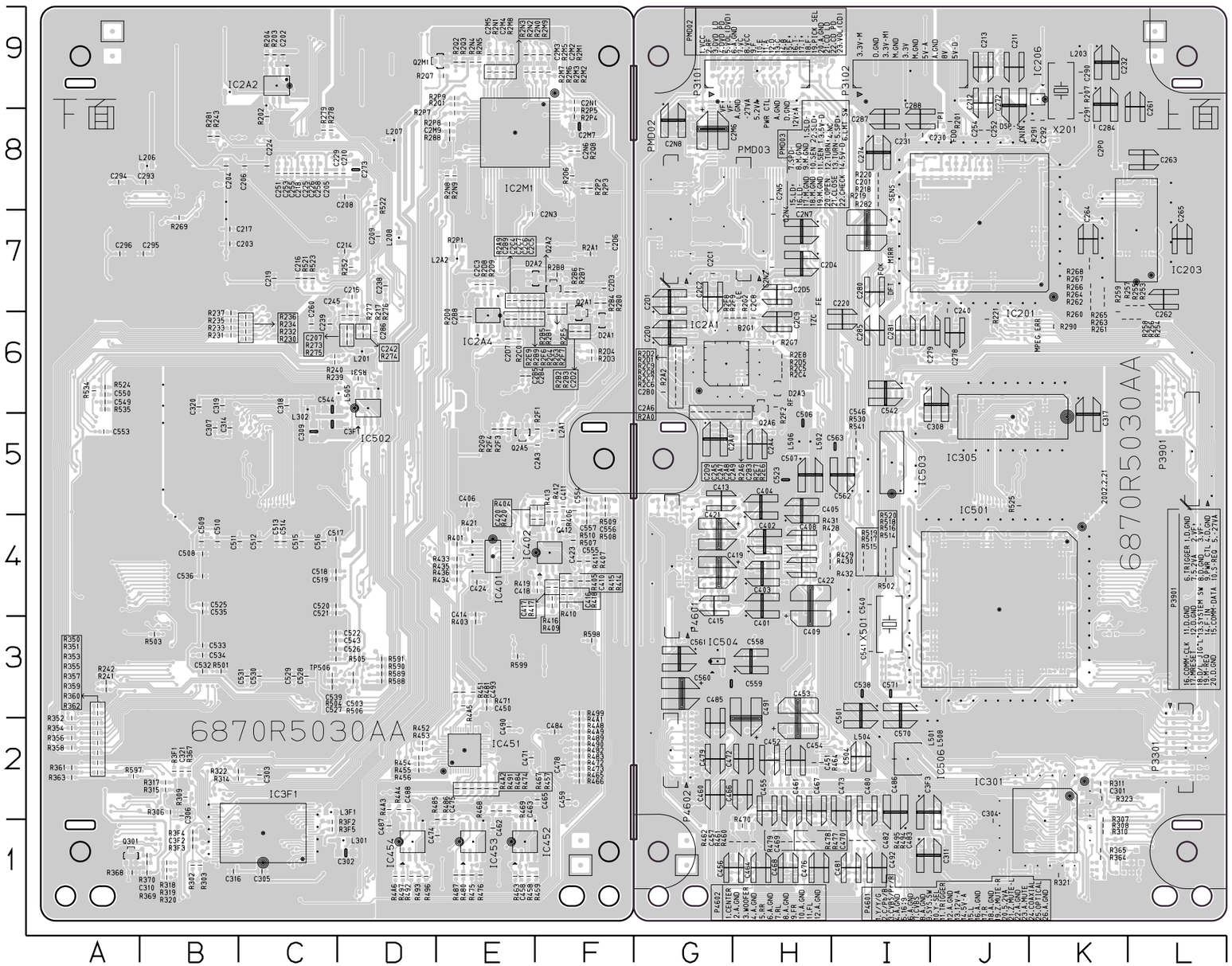
MODE / PIN NO.	LEVEL(V)
DEIVE&RF	
IC2A1	
1	
2	3.1V
3	2.5~3.7
4	2
5	3.4
6	2.5
7	NC
8	NC
9	
10	1.2V
11	2.78V
12	3.0~3.6
13	3.0~3.6
14	2.7V
15	1.9V
16	
17	
18	
19	
20	
21	5.18V
22	5.18V
23	
24	
25	
26	0~3.8V
27	0V~4V
28	3.3V
29	5.2V
30	0
31	0V
32	
33	
34	5.18V
35	
36	2.2V~3.5
37	2.2V
38	3.4~3.8V
39	2.2~2.6
40	0V
41	5V
42	
43	0.4V
44	4V
45	2.4V
46	2.4V
47	2.4~2.6V
48	
49	
50	2.4V~2.6V
51	2.4V~2.6V
52	2.4V~2.6V
53	2.4V

MODE / PIN NO.	LEVEL(V)
54	2.4V
55	2.4V
56	2.4V
57	2.4V
58	2.4V
59	2.4V
60	2.4V
61	0V
62	0V
63	5V
64	0V
IC2M1	
1	2.16
2	2.22
3	2.16
4	2.16
5	2.16
6	2.15
7	0
8	2.58
9	2.16
10	2.16
11	2.22
12	2.23
13	2.25
14	0
15	0
16	2.25
17	0
18	0
19	0
20	0
21	0
22	0
23	8
24	3.73
25	3.73
26	3.73
27	3.73
28	3.82
29	3.61
30	0
31	0
32	4.68
33	2.78
34	0
35	3.7
36	3.75
37	3.84
38	3.6
39	8.01
40	1.94
41	0~1.94
42	1.94
43	0

MODE / PIN NO.	LEVEL(V)
44	8.01
45	2.16
46	0
47	7.96
48	2.1

PRINTED CIRCUIT DIAGRAMS

1. MAIN P.C.BOARD



LOCATIONGUIDE

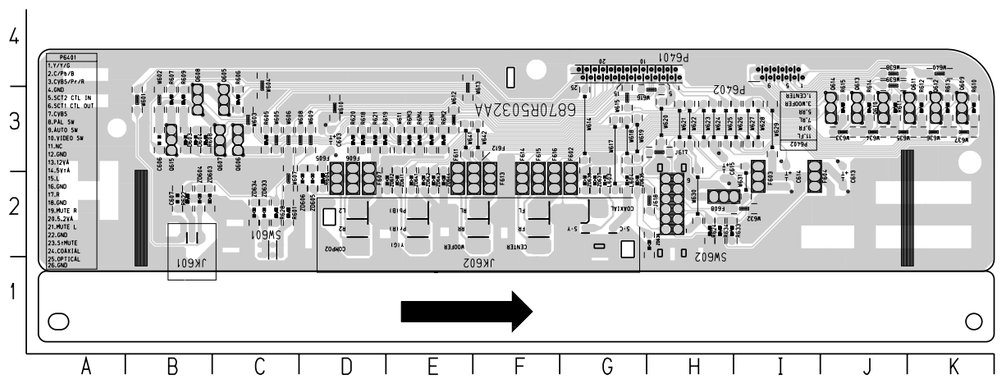
(BOTTOM SIDE)

C202	C9	C306	B2	C531	C3	PIN6870865911	E4	PIN6870866002	F3	PIN6870866290	C5	Q2M1	E9	R2M2	F9	R3F4	B1	R4Y97	D1
C203	B7	C307	B5	C532	B3	PIN6870865912	F4	PIN6870866007	E4	PIN6870866303	E4	Q301	A1	R2M3	F9	R3F5	C1	R4Y99	F3
C204	B8	C309	C5	C533	B3	PIN6870865914	E4	PIN6870866026	E3	PIN6870866308	E4	R202	C8	R2M5	E9	R401	E4	R4A1	F2
C205	C8	C310	B1	C534	B3	PIN6870865916	F4	PIN6870866031	F6	PIN6870866309	E4	R203	C9	R2M6	E9	R403	E3	R4A2	E2
C206	C8	C314	B5	C535	B4	PIN6870865917	E4	PIN6870866033	F6	PIN6870866310	E4	R204	C9	R2M7	E9	R404	F3	R4A3	D2
C207	D6	C316	B1	C536	B4	PIN6870865918	E5	PIN6870866034	F6	PIN6870866311	E4	R217	D6	R2M8	E9	R405	F4	R4A4	D2
C208	D8	C318	C6	C539	C3	PIN6870865919	E4	PIN6870866041	F6	PIN6870866320	E2	R230	C6	R2M9	E9	R406	F4	R4A5	E3
C209	D7	C319	B6	C543	C3	PIN6870865920	F4	PIN6870866042	F6	PIN6870866323	E2	R231	B6	R2N0	E9	R407	F4	R4A6	D1
C210	D8	C320	B6	C544	C6	PIN6870865922	F4	PIN6870866050	C9	PIN6870866324	E2	R232	C6	R2N1	E9	R409	F4	R4A8	F2
C214	D7	C321	B2	C549	A6	PIN6870865923	F4	PIN6870866051	E7	PIN6870866325	E2	R233	B6	R2N2	E9	R410	F4	R4A9	F2
C215	D7	C3F1	C5	C550	A6	PIN6870865924	F5	PIN6870866053	F9	PIN6870866333	E3	R234	C6	R2N3	E9	R411	F4	R501	B3
C216	C7	C3F2	B1	C553	A5	PIN6870865925	F4	PIN6870866054	F9	PIN6870866334	E3	R235	B6	R2N4	E9	R412	F5	R503	B3
C217	B7	C406	E5	C554	F5	PIN6870865926	F4	PIN6870866055	F9	PIN6870866336	D2	R236	C6	R2N5	E9	R413	F5	R504	C3
C218	C8	C410	F4	C555	F4	PIN6870865928	F4	PIN6870866056	E9	PIN6870866337	D2	R237	B6	R2N8	E8	R414	F4	R505	C3
C219	C7	C411	F5	C556	F5	PIN6870865929	F4	PIN6870866059	E9	PIN6870866339	D2	R239	C6	R2N9	E8	R415	F4	R506	D3
C224	C8	C412	F4	C557	F5	PIN6870865930	F4	PIN6870866060	E9	PIN6870866340	D2	R240	C6	R2P1	E7	R416	F4	R507	F4
C225	C8	C414	E4	D2A1	F6	PIN6870865931	F4	PIN6870866061	E9	PIN6870866342	D2	R241	A3	R2P2	F8	R417	F4	R508	F4
C226	C8	C416	F4	D2A2	F7	PIN6870865932	F4	PIN6870866062	E9	PIN6870866344	D1	R242	A3	R2P3	F8	R418	F4	R509	F5
C229	C8	C417	F4	IC2A2	C9	PIN6870865933	E4	PIN6870866063	E9	PIN6870866357	D4	R243	B8	R2P4	F8	R419	F4	R510	F5
C238	D7	C418	F4	IC2A4	E6	PIN6870865938	F4	PIN6870866067	E9	PIN6870866358	D4	R252	D7	R2P5	F8	R420	F5	R521	C7
C239	C6	C420	E4	IC2M1	E8	PIN6870865939	E3	PIN6870866076	C1	PIN6870866359	D4	R269	B7	R2P7	E8	R421	E4	R522	D6
C242	D6	C423	F4	IC3F1	C1	PIN6870865941	E2	PIN6870866077	C1	PIN6870866367	D3	R273	D6	R2P8	E8	R433	E4	R523	C7
C245	D7	C424	E4	IC401	E4	PIN6870865945	E1	PIN6870866099	A8	PIN6870866368	D3	R274	D6	R2P9	E9	R434	E4	R524	A6
C251	C8	C450	E3	IC402	F4	PIN6870865946	E1	PIN6870866100	B8	PIN6870866369	D3	R275	D6	R2Q1	E9	R435	E4	R531	D6
C253	C8	C458	E1	IC451	E2	PIN6870865947	F2	PIN6870866101	B8	PIN6870866372	D3	R276	D6	R2Q2	E9	R436	E4	R534	A6
C255	C8	C459	F2	IC452	E1	PIN6870865948	F2	PIN6870866102	B7	PIN6870866377	C3	R277	D6	R2Q3	E9	R451	E4	R535	A6
C258	C8	C462	E1	IC453	D1	PIN6870865951	E2	PIN6870866120	B8	PIN6870866378	C3	R278	C8	R2Q7	E9	R452	D2	R588	D3
C260	C6	C463	E2	IC454	D1	PIN6870865952	E2	PIN6870866124	C8	PIN6870866379	C3	R279	C8	R2Q8	F8	R453	D2	R589	D3
C273	B8	C465	F2	IC502	D6	PIN6870865953	E2	PIN6870866134	C8	PIN6870866544	E5	R281	B8	R302	B1	R454	D2	R590	D3
C286	D6	C471	E2	L201	D6	PIN6870865955	E2	PIN6870866136	D8	PIN6870866546	E5	R288	E8	R303	B1	R455	D2	R591	D3
C293	B8	C474	E1	L206	B8	PIN6870865957	E1	PIN6870866161	D7	PIN6870866549	A2	R2A1	F7	R306	B2	R456	D2	R597	A2
C294	A8	C475	E1	L207	B8	PIN6870865958	E2	PIN6870866170	D8	PIN6870866550	E4	R2A9	E7	R309	B2	R457	D2	R598	F3
C295	B7	C478	F2	L208	D7	PIN6870865961	F2	PIN6870866173	C6	PIN6870866555	D2	R2B0	F7	R314	C2	R458	E1	R599	E3
C296	A7	C484	F2	L2A1	F5	PIN6870865962	E2	PIN6870866174	C6	PIN6870866556	D2	R2B1	F6	R315	B2	R459	F1	TP1213	D7
C2A3	F5	C487	D1	L2A2	F5	PIN6870865964	E2	PIN6870866178	C6	PIN6870866557	D2	R2B2	F6	R317	B2	R460	F1	TP1215	C7
C2B4	E6	C488	D2	L301	D1	PIN6870865965	E2	PIN6870866179	C7	PIN6870866558	D3	R2B3	F6	R318	B1	R465	E2	TP1245	B8
C2B5	E6	C490	E2	L302	C6	PIN6870865966	F2	PIN6870866180	C7	PIN6870866559	F6	R2B4	F7	R319	B1	R466	E2	TP1265	C7
C2B8	E6	C493	E3	L3F1	C2	PIN6870865967	F2	PIN6870866181	C7	PIN6870866562	E7	R2B5	F7	R320	B1	R467	E2	TP2A1	E7
C2B9	E7	C503	D3	L505	D6	PIN6870865968	D2	PIN6870866204	B2	PIN6870866563	F8	R2B6	F7	R322	C2	R468	E2	TP2A3	E7
C2C1	E7	C508	B4	PIN6870865965	E5	PIN6870865970	D1	PIN6870866208	B2	PIN6870866564	B1	R2B7	F7	R350	A3	R469	E2	TP2A6	E6
C2C4	E7	C509	B4	PIN6870865967	E6	PIN6870865972	D1	PIN6870866210	C2	PIN6870866566	D6	R2B8	F7	R351	A3	R471	E3	TP2A9	D6
C2C5	F7	C510	B4	PIN6870865968	E6	PIN6870865973	F2	PIN6870866213	B2	PIN6870866567	D6	R2B9	E6	R352	A2	R472	F2	TP2T1	B8
C2C6	F7	C511	C4	PIN6870865969	E6	PIN6870865975	D2	PIN6870866227	B1	PIN6870866570	B2	R2C0	E6	R353	A2	R473	F2	TP346	B1
C2C7	F7	C512	C4	PIN6870865971	E7	PIN6870865977	D2	PIN6870866233	B2	PIN6870866571	B5	R2D0	E6	R354	A2	R474	F2	TP348	B1
C2D2	F6	C513	C4	PIN6870865972	E6	PIN6870865978	D2	PIN6870866234	B2	PIN6870866575	C8	R2D3	F6	R355	A2	R475	E1	TP349	B1
C2D3	F7	C514	C4	PIN6870865973	F9	PIN6870865979	E2	PIN6870866236	B2	PIN6870866576	E8	R2D4	F6	R356	A2	R476	E1	TP363	A2
C2D6	F7	C515	C4	PIN6870865974	E9	PIN6870865980	D4	PIN6870866238	D5	PIN6870866578	H7	R2D8	E7	R357	A2	R480	E1	TP369	B1
C2D7	E6	C516	C4	PIN6870865975	E9	PIN6870865983	D4	PIN6870866239	D5	PIN6870866579	F6	R2D9	E7	R358	A2	R481	E3	TP506	C3
C2M2	F9	C517	C4	PIN6870865976	E9	PIN6870865984	D3	PIN6870866243	B2	PIN6870866580	F7	R2E0	E7	R359	A2	R482	F2	TP518	B3
C2M3	E9	C518	C4	PIN6870865977	E9	PIN6870865986	B2	PIN6870866250	C5	PIN6870866582	E5	R2F0	E7	R360	A2	R483	F2	TP521	A3
C2M4	E9	C519	C4	PIN6870865981	F8	PIN6870865987	B4	PIN6870866251	B5	PIN6870866582	E5	R2F1	F5	R361	A2	R484	E2	TP527	A4
C2M5	E9	C520	C4	PIN6870865982	E7	PIN6870865990	D5	PIN6870866252	C5	PIN6870866583	E5	R2F3	E5	R362	A2	R485	E1	TP528	B4
C2M7	F8	C521	C4	PIN6870865987	F8	PIN6870865991	E4	PIN6870866253	C5	PIN6870866586	B1	R2F4	E5	R363	A2	R486	E1		
C2M9	E8	C522	C3	PIN6870865990	B7	PIN6870865995	F5	PIN6870866254	C5	PIN6870866587	C5	R2F5	F7	R367	B2	R487	E1		
C2N1	F9	C525	B4	PIN6870865994	E9	PIN6870865996	F5	PIN6870866256	C5	PIN6870866588	F6	R2F6	E6	R368	A1	R489	F2		
C2N3	E7	C526	C3	PIN6870865995	F8	PIN6870865997	F5	PIN6870866257	C5	PIN6870866589	F7	R2F7	E6	R369	B1	R490	F2		
C2N6	F8	C527	C3	PIN6870865998	D7	PIN6870865998	F5	PIN6870866258	C5	PIN6870866591	E8	R2G3	F6	R370	B1	R491	E2		
C302	D1	C528	C3	PIN6870865999	C7	PIN6870865999	F5	PIN6870866259	C5	Q2A1	F6	R2G4	E6	R3F1	B2	R492	D1		
C303	C1	C529	C3	PIN6870866001	D7	PIN6870866000	F5	PIN6870866260	C5	Q2A2	E5	R2M0	E9	R3F2	B1	R493	D1		
C305	C1	C530	C3	PIN6870866010	C7	PIN6870866001	F3	PIN6870866261	C6	Q2A5	E5	R2M1	F9	R3F3	B1	R496	D1		

(TOP SIDE)

C201	I8	C402	H4	IC301	K1	PIN6870865958	H1	PIN6870866119	K8	PIN6870866403	I5	R253	L7	R494	I1	TP324	K1
C211	J9	C403	H4	IC305	J5	PIN6870865959	H1	PIN6870866121	K8	PIN6870866404	L5	R254	L6	R495	I1	TP325	J1
C212	J9	C404	H5	IC501	J4	PIN6870865963	I1	PIN6870866123	J8	PIN6870866405	L5	R255	L7	R502	I4	TP326	J1
C213	J9	C408	H4	IC503	I5	PIN6870865964	I1	PIN6870866133	J8	PIN6870866406	L5	R256	L6	R514	I4	TP327	J1
C220	I6	C408	H4	IC504	G3	PIN6870865971	I1	PIN6870866135	J8	PIN6870866407	L6	R257	L7	R515	I4	TP328	J1
C230	I8	C409	H4	IC506	I2	PIN6870865974	G3	PIN6870866147	I8	PIN6870866408	L3	R258	K6	R516	I4	TP329	J1
C231	I8	C411	G5	L203	K8	PIN6870865975	I1	PIN6870866174	I8	PIN6870866410	L2	R259	K6	R517	I4	TP330	J1
C232	K9	C415	G4	L501	I2	PIN6870865980	G2	PIN6870866175	J6	PIN6870866411	L2	R260	K7	R518	I4	TP331	J1
C240	J7	C419	G4	L502	H5	PIN6870865982	I3	PIN6870866176	J6	PIN6870866412	L2	R261	K7	R519	I4	TP332	J1
C252	J8	C421	G4	L504	I2	PIN6870865985	I2	PIN6870866177	J6	PIN6870866413	L2	R262	K7	R520	I4	TP333	J1
C254	J8	C422	H4	L506	H5	PIN6870865988	I3	PIN6870866198	K7	PIN6870866414	L2	R263	K7	R525	J5	TP334	J1
C261	L9	C451	H2	L508	J2	PIN6870865989	I3	PIN6870866200	K9	PIN6870866415	L2	R264	K7	R530	I5	TP335	J1
C262	J7	C452	H2	P3101	K9	PIN6870866201	J8	PIN6870866201	J8	PIN6870866416	L2	R265	K7	R541	I5	TP336	J2
C263	L8	C453	H2	P3102	I9	PIN6870866203	G3	PIN6870866202	K2	PIN6870866417	L2	R266	K7	TP201	K6	TP337	J1
C264	K7	C454	H2	P3301	L2	PIN6870866204	G3	PIN6870866274	K3	PIN6870866418	L2	R267	K7	TP202	J8	TP338	J2
C265	L7	C455	H2	P3901	L5	PIN6870866205	H6	PIN6870866275	J3	PIN6870866419	L2	R268	K7	TP205	I8	TP339	K3
C272	J9	C456	H1	P4601	G4	PIN6870866208	H4	PIN6870866278	J3	PIN6870866420	L2	R282	I8	TP206	J8	TP340	J2
C274	I8	C457	H1	P4602	G2	PIN6870866213	H5	PIN6870866220	J2	PIN6870866421	L6	R290	K6	TP212	I7	TP341	J2
C278	J6	C460	H2	PIN6870865957	K8	PIN6870866405	H6	PIN6870866221	J2	PIN6870866422	L6	R291	K8	TP214	I7	TP342	K3
C279	J6	C461	H2	PIN6870865958	G6	PIN6870866216	H6	PIN6870866222	J3	PIN6870866423	L6	R2A0	G6	TP216	I7	TP343	K1
C280	I7	C464	H1	PIN6870865959	G6	PIN6870866220	H6	PIN6870866223	J2	PIN6870866425	G2	R2A2	G6	TP233	J8	TP344	I1
C281	I6	C466	I2	PIN6870865960	G6	PIN6870866221	H6	PIN6870866225	K	PIN6870866426	G2	R2A6	G6	TP234	J8	TP345	K1
C284	K9	C467	H2	PIN6870865961	G6	PIN6870866222	I6	PIN6870866235	K2	PIN6870866427	G2	R2C4	H6	TP240	J8	TP347	K1
C285	I6	C468	H1	PIN6870865962	G6	PIN6870866228	H6	PIN6870866241	K5	PIN6870866428	G2	R2C5	H6	TP241	J8	TP365	J1
C287	I8	C469	H1	PIN6870865964	G6	PIN6870866229	H6	PIN6870866242	K5	PIN6870866429	G2	R2C6	G6	TP260	I8	TP366	J1
C288	I8	C470	H1	PIN6870865965	G6	PIN6870866235	G7	PIN6870866264	J5	PIN6870866430	G2	R2C7	G6	TP261	K6	TP367	J1
C290	K9	C472	H2	PIN6870865970	G7	PIN6870866238	G7	PIN6870866269	I5	PIN6870866531	G7	R2C8	G6	TP264	I8	TP370	K1
C291	K8	C473	H2	PIN6870865979	H7	PIN6870866239	G7	PIN6870866270	J5	PIN6870866532	G7	R2C9	G6	TP267	J6	TP501	I4
C292	K8	C476	H1	PIN6870865980	H7	PIN6870866440	G6	PIN6870866271	J5	PIN6870866533	G7	R2D1	G6	TP268	J6	TP509	I4
C297	I7	C479	G2	PIN6870865983	H7	PIN6870866446	G6	PIN6870866272	J5	PIN6870866534	G7	R2D2	G6	TP269	J6	TP510	K2
C2A0	G5	C480	I2	PIN6870865984	G8	PIN6870866447	H6	PIN6870866275	J5	PIN6870866535	G7	R2D5	H6	TP270	J8	TP511	K1
C2A4	H5	C481	I1	PIN6870865985	H8	PIN6870866466	H5	PIN6870866276	J5	PIN6870866536	G8	R2E6	H6	TP2A0	H6	TP512	K1
C2A5	G6	C482	I1	PIN6870865986	H8	PIN6870866468	G8	PIN6870866277	J5	PIN6870866537	G8	R2E7	H6	TP2A2	H7	TP513	K2
C2A6	G6	C483	I1	PIN6870865988	I8	PIN6870866469	G8	PIN6870866278	J5	PIN6870866538	G8	R2E8	H6	TP2A4	H7	TP514	K2
C2A7	G6	C485	G2	PIN6870865989	I8	PIN6870866470	G8	PIN6870866279	J5	PIN6870866539	H7	R2F2	H6	TP2A5	H6	TP515	K3
C2A8	G6	C486	I2	PIN6870865991	J9	PIN6870866480	L6	PIN6870866283	J5	PIN6870866540	H7	R2F8	G6	TP2A7	H6	TP516	K3
C2A9	G6	C487	H2	PIN6870865992	J8	PIN6870866481	L6	PIN6870866284	K4	PIN6870866541	H8	R2F9	H6	TP2A8	I6	TP517	K3
C2B0	G6	C492	I1	PIN6870865993	J9	PIN6870866483	L6	PIN6870866288	J5	PIN6870866542	H8	R2G1	H6	TP2T0	K8	TP519	K3
C2B3	H6	C501	I3	PIN6870865996	I8	PIN6870866484	L6	PIN6870866289	J5	PIN6870866543	H8	R2G2	H6	TP2T2	K8	TP520	K2
C2C1	G7	C504	I2	PIN6870865997	I8	PIN6870866485	K6	PIN6870866294	K5	PIN6870866548	K6	R2G7	H6	TP2T3	K8	TP522	K2
C2C2	G7	C506	H5	PIN6870865998	J7	PIN6870866486	K6	PIN6870866295	K5	PIN6870866551	I4	R307	K1	TP301	K2	TP523	K4
C2C8	H6	C507	H5	PIN6870866003	J8	PIN6870866487	K6	PIN6870866296	K5	PIN6870866552	I4	R308	K1	TP303	J2	TP524	K4
C2C9	H6	C508	I2	PIN6870866005	J8	PIN6870866488	K7	PIN6870866297	K5	PIN6870866553	I4	R310	K1	TP304	K2	TP525	L3
C2D0	G6	C538	I3	PIN6870866007	I6	PIN6870866492	K7	PIN6870866298	K5	PIN6870866554	H4	R311	K2	TP305	J2	TP526	L4
C2D1	G7	C540	I4	PIN6870866008	K9	PIN6870866493	K7	PIN6870866299	K5	PIN6870866560	G7	R321	K1	TP306	K2	TP529	L4
C2D4	H7	C541	I4	PIN6870866009	K9	PIN6870866494	K7	PIN6870866300	K5	PIN6870866567	I6	R322	K2	TP307	J2	TP530	L4
C2D5	H7	C542	I6	PIN6870866913	H4	PIN6870866495	K7	PIN6870866301	K5	PIN6870866568	I7	R364	K1	TP308	K2	TP531	L4
C2D9	G6	C546	I5	PIN6870866915	H4	PIN6870866496	K7	PIN6870866302	K5	PIN6870866569	L7	R365	K1	TP309	J2	TP532	L4
C2M6	G8	C562	I3	PIN6870866921	H4	PIN6870866497	K7	PIN6870866305	K4	PIN6870866572	I6	R428	H4	TP310	J2	TP533	L4
C2N2	H7	C563	I5	PIN6870866927	H5	PIN6870866498	K7	PIN6870866306	H4	PIN6870866578	H7	R429	H4	TP311	J2	TP534	L4
C2N4	H7	C564	G3	PIN6870866934	G4	PIN6870866502	K8	PIN6870866343	H1	PIN6870866586	I8	R430	H4	TP312	K3	TP535	L4
C2N5	H8	C565	G3	PIN6870866935	G4	PIN6870866503	K8	PIN6870866344	I1	PIN6870866593	I5	R431	H4	TP313	J2	TP536	L4
C2N7	H7	C562	I5	PIN6870866937	H4	PIN6870866504	K8	PIN6870866348	I4	PMD02	G7	R432	H4	TP314	K2	X201	K9
C2N8	G8	C563	I5	PIN6870866940	H2	PIN6870866505	K8	PIN6870866349	I4	PMD03	H7	R460	H1	TP315	J2	X501	I3
C301	K2	C570	I3	PIN6870866942	H2	PIN6870866506	K8	PIN6870866350	I4	Q2A6	H6	R461	H1	TP316	K2		
C304	J1	C571	I3	PIN6870866943	H1	PIN6870866507	L8	PIN6870866351	I4	R201	J8	R462	G1	TP317	J2		
C308	J6	D2A3	H6	PIN6870866944	G1	PIN6870866508	L8	PIN6870866352	I4	R207	K9	R464	H2	TP318	K2		
C311	I1	IC201	J7	PIN6870866948	G2	PIN6870866509	L8	PIN6870866353	J4	R218	I8	R467	H1	TP319	K2		
C317	K5	IC203	L7	PIN6870866949	H2	PIN6870866511	L8	PIN6870866354	I4	R219	I8	R477	H1	TP320	K1		
C3F3	I2	IC206	K9	PIN6870866954	G2	PIN6870866511	L8	PIN6870866370	G5	R220	I8	R478	H1	TP322	K2		
C401	H6	IC2A1	G6	PIN6870866956	H1	PIN6870866518	K8	PIN6870866399	I5	R221	J6	R479	H1	TP323	K1		

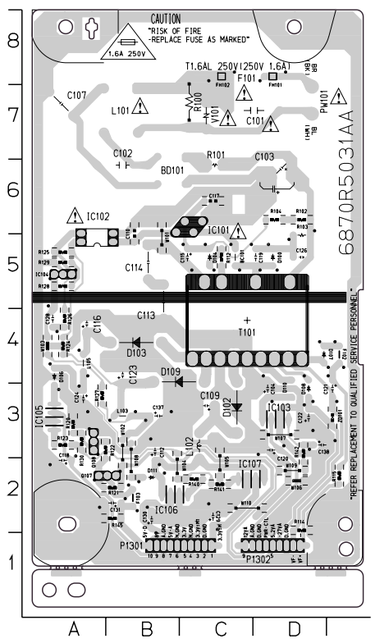
2. AV JACK P.C.BOARD



LOCATION GUIDE

C603	D3	R605	C3
C606	B3	R606	C3
C607	B2	R607	B3
C613	J2	R608	B3
C614	I2	R609	B3
C615	H3	R610	K3
D603	B3	R611	J3
D604	B3	R612	K3
F602	G2	R613	K3
F603	I2	R614	J3
F604	I2	R615	J3
F605	D2	R618	D3
F606	D2	R619	D3
F607	D2	R620	D3
F608	H2	R621	D3
F611	E2	R622	B2
F612	F2	R624	H2
F613	F2	R628	C2
F614	F2	R633	H2
F615	F2	R634	H2
F616	F2	R6M1	E3
J617	H3	R6M2	E3
J618	H2	R6M3	E3
JK601	B2	R6M4	E3
JK602	F2	SW601	C2
L603	G2	SW602	H2
L604	G2	ZD603	B2
P6401	H4	ZD604	B2
P6402	I4	ZD605	D2
Q605	C3	ZD606	D2
Q606	C3	ZD611	E2
Q607	C3	ZD612	E2
Q608	B3	ZD633	C2
Q609	K3	ZD634	C2
Q610	J3	ZD635	G2
Q611	K3	ZD636	H2
Q612	K3	ZD637	G2
Q613	J3	ZD638	G2
Q614	J3	ZD641	E2
Q615	B3	ZD642	E2
R601	C2	ZD643	E2
R604	D2	ZD644	E2

3. SMPS P.C.BOARD

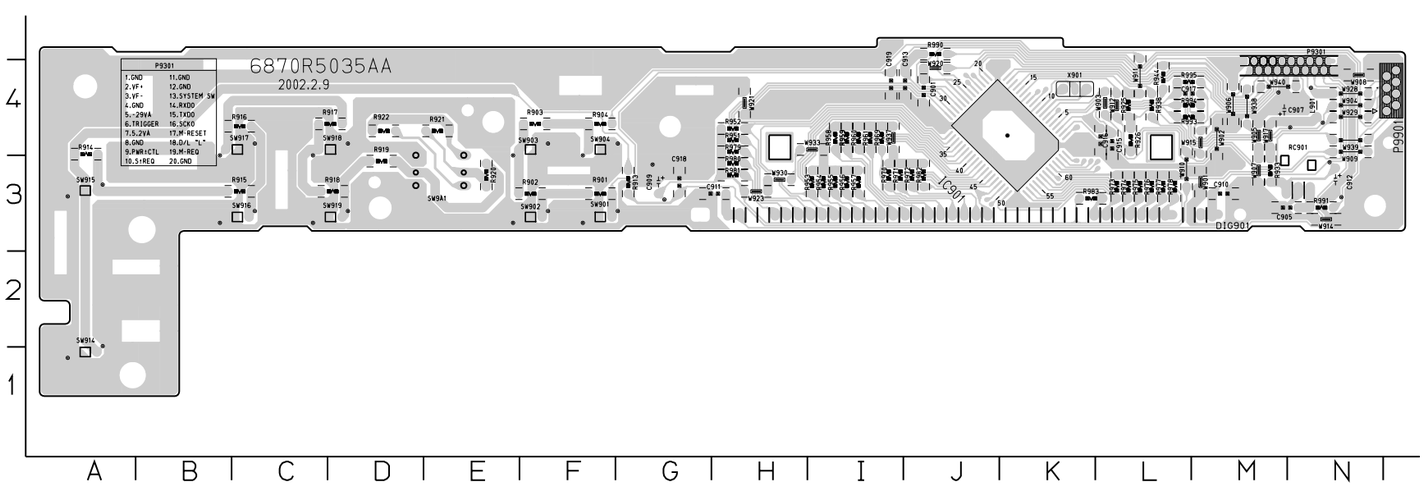


LOCATION GUIDE

BC101	C5	IC101	C6
BD101	B6	IC102	A5
C101	D7	IC103	D3
C102	B6	IC104	A5
C103	D6	IC105	A3
C104	D3	IC106	B2
C107	A7	IC107	D2
C109	C3	L101	B7
C110	B6	L102	C3
C112	B3	L103	B3
C113	B5	L105	A4
C114	B5	P1301	C1
C115	C5	P1302	D1
C116	A4	PW101	D7
C117	C6	Q107	B2
C118	A2	Q108	A3
C119	D5	R100	C7
C120	D3	R101	C6
C121	E3	R102	D6
C122	D3	R103	D5
C123	B4	R104	D6
C124	A3	R112	C5
C126	D5	R114	D2
C128	A4	R115	E2
C129	C2	R120	A3
C130	B2	R121	B2
C131	B2	R122	A3
C137	B3	R123	A3
C138	D3	R124	A4
D100	D5	R125	A5
D102	C3	R126	A4
D103	B4	R127	A3
D104	C5	R128	A5
D106	A4	R129	A5
D107	D4	R130	A3
D108	D3	R140	C2
D109	B4	R141	C2
D110	D3	R142	D3
D111	B2	R145	B2
F102	E4	T101	C4
F103	B2	V101	C7
FH101	D8	ZD101	E3
FH102	C8		

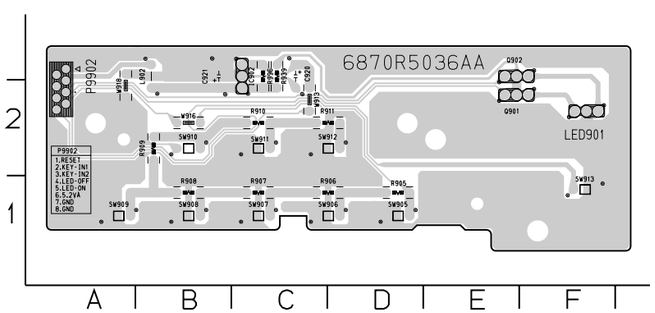
NOTES) ⚠ Warning
Parts that are shaded are critical
With respect to risk of fire or
electricial shock.

4. FRONT P.C.BOARD



LOCATION GUIDE

C901	J4	R955	I3
C905	M3	R956	I3
C907	M4	R957	I3
C909	G3	R958	I4
C910	M3	R959	I4
C911	H3	R960	I4
C912	N3	R961	I4
C913	J4	R969	I4
C915	L4	R970	I3
C916	L4	R971	I3
C917	L4	R972	J3
C918	G3	R973	L3
C919	I4	R974	L3
DIG901	J3	R975	L3
L901	N4	R976	L3
P9301	N4	R977	L3
P9901	O4	R978	L3
R901	F3	R979	H4
R902	F3	R980	H3
R903	F4	R981	H3
R904	F4	R982	J3
R913	G3	R983	K3
R914	A4	R990	J5
R915	C3	R991	N3
R916	C4	R993	L4
R917	D4	R994	L4
R918	D3	R995	L4
R919	D3	RC901	N3
R920	E3	SW901	F3
R921	E4	SW902	F3
R922	D4	SW903	F4
R925	L4	SW904	F4
R926	L4	SW914	A1
R933	M3	SW915	A3
R938	L4	SW916	C3
R944	L4	SW917	C4
R951	H4	SW918	D4
R952	H4	SW919	D3
R953	I3	SW9A1	E3
R954	I3	X901	K4



MEMO

MEMO

SECTION 4 MECHANISM

CONTENTS

DECK MECHANISM PARTS LOCATIONS

- **Top View.....4-1**
- **Top View(without Tray Disc) 4-1**
- **Bottom View 4-1**

DECK MECHANISM DISASSEMBLY

1. Holder Assembly Clamp.....4-2

1-1. Plate Clamp 4-2
1-2. Magnet Clamp 4-2
1-3. Upper Clamp.....4-2
1-4. Holder Clamp.....4-2

2. Base Assembly Tray 4-2

2-1. Tray Disc(Fig.4-2) 4-2
2-2. Roller Base Tray 4-2
2-3. PCB Assembly Tray.....4-2
2-4. Motor Assembly Tray 4-2
2-5. Gear Tray.....4-2
2-6. Gear Wheel Tray 4-2
2-7. Base Tray.....4-2

3. Frame Assembly Up/Down 4-3

3-1. PCB Assembly Junction 4-3
3-2. Base Assembly Sled Damper.....4-3
3-2-1. Gear Assembly Feed 4-3
3-2-2. Gear Assembly Middle.....4-3
3-2-3. Gear Assembly Rack 4-3
3-3. Rubber Damper 4-3
3-4. Frame Up/Down.....4-3

4. Base Assembly Main.....4-4

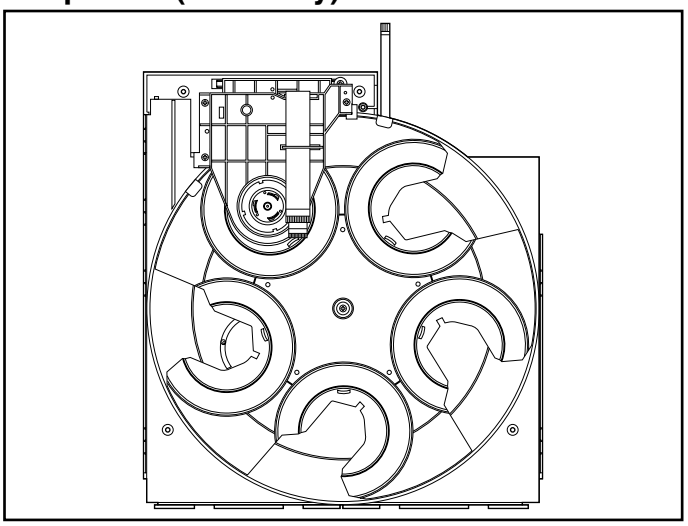
4-1. PCB Assembly Main Mode 4-4
4-2. Gear Slider.....4-4
4-3. Gear Exchange.....4-4
4-4. Gear Main 4-4
4-5. Gear Up/Down 4-4
4-6. Gear Wheel Main.....4-4
4-7. Gear Loading 4-4
4-8. Motor Assembly Main 4-4
4-9. Base Main.....4-4

EXPLODED VIEW

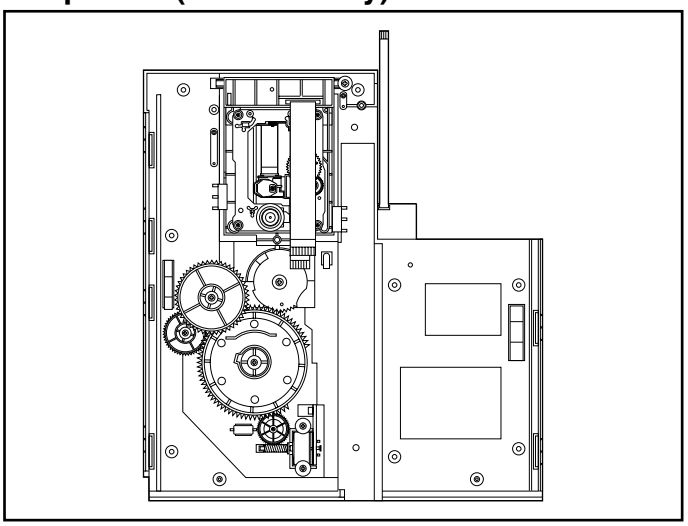
1. Deck Mechanism Exploded View....4-5

DECK MECHANISM PARTS LOCATION

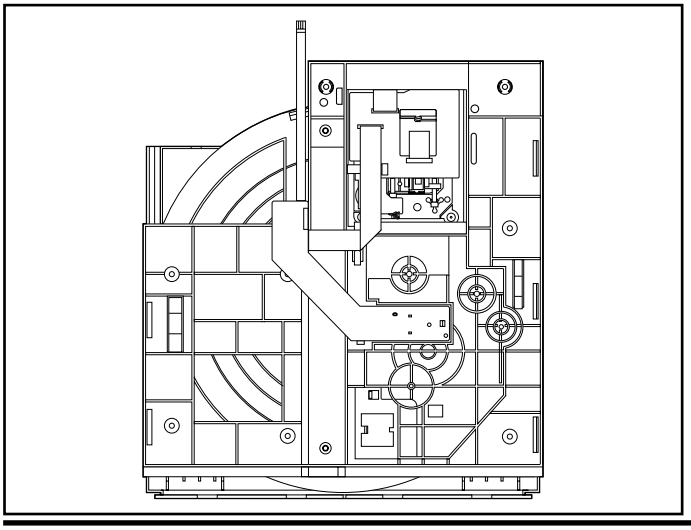
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.		Parts	Fixing Type	Disassembly	Figure
	1	Holder Assembly Clamp	3 Screws 2 Connectors 1 Hook	Top	4-1
1	2	Plate Calmp		Top	4-1
1,2	3	Magnet Clamp		Top	4-1
1,2,3	4	Upper Clamp		Top	4-1
1,2,3,4	5	Holder Clamp		Top	4-1
	6	Base Assembly Tray	2 Locking Tabs	Top	4-2
	7	Tray Disc	1 Screw	Top	4-2
6	8	Roller Base Tray	2 Locking Tabs	Bottom	4-2
6	9	PCB Assembly Tray	2 Screws 1 Connector	Bottom	4-2
6,7	10	Motor Assembly Tray	2 Screws	Top	4-2
6,7,10	11	Gear Tray		Top	4-2
6,7,10,11	12	Gear Wheel Tray		Top	4-2
6,7,8,9,10,11,12	13	Base Tray		Top	4-2
1	14	Frame Assemly Up/Down	1 Screw	Top	4-3
	15	PCB Assembly Junction	2 Screws 5 Connectors	Bottom	4-3
1	16	Base Assembly Sled Damper	4 Screws 1 Connector	Top	4-3
1	17	Gear Assembly Feed	1 Locking Tab	Top	4-3
1,17	18	Gear Middle		Top	4-3
1,17	19	Gear Assembly Rack	1 Screw	Top	4-3
1	20	Rubber Damper		Top	4-3
1,15,16,17,18,19,20	21	Frame Up/Down		Top	4-3
1,14	22	Base Assembly Main		Top	4-4
	23	PCB Assembly Main Mode	2 Connectors 3 Screws	Bottom	4-4
6	24	Gear Slider	1 Screw	Top	4-4
6,24	25	Gear Exchange	1 Screw	Top	4-4
6,24	26	Gear Main	1 Screw	Top	4-4
6,24,26	27	Gear Up/Down	1 Screw	Top	4-4
6,24,26	28	Gear Wheel Main	1 Screw	Top	4-4
6,24,26,28	29	Gear Loading		Top	4-4
6,28	30	Motor Assembly Main	2 Screws 1 Locking Tab	Top	4-4
1,6,14,23,24,25,26,27,28,29,30	31	Base Main		Top	4-4

Note

When reassembling, perform the procedure in reverse order.

The “Bottom” on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY

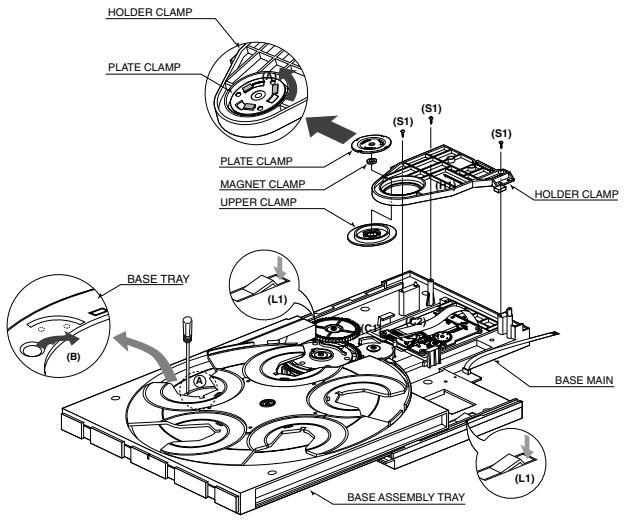


Fig. 4-1

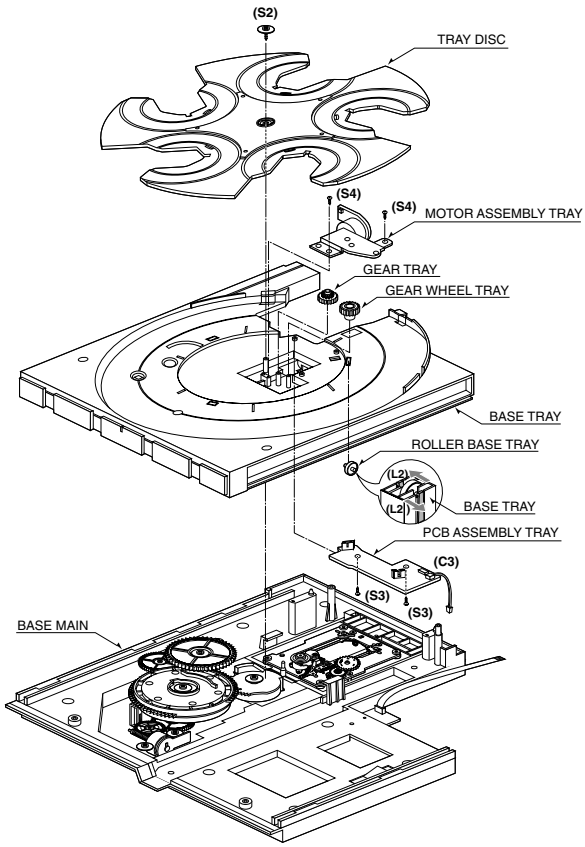


Fig. 4-2

1. Holder Assembly Clamp(Fig. 4-1)

1) Release 3 Screws(S1).
2) Unlock The Connectors (C1), (C2) from the Hook(H1).

1-1. Plate Clamp

1) Hold and fix the Upper Clamp under the Holder Assembly Clamp, and then turn the Plate Clamp to the counterclockwise direction(arrow(A)).

1-2. Magnet Clamp

1-3. Upper Clamp

1-4. Holder Clamp

Note

- When reassembling, hold and fix the Upper Clamp as above No. 1-1(1), and then turn the Plate Clamp to the clockwise direction.

2. Base Assembly Tray(Fig. 4-1)

1) Turn the Ⓐ portion to the direction of arrow(B) to move the Base Assembly Tray in front of you.
2) Push down two Locking Tabs(L1) located to both sides of the Base Main, and then pull the Base Assembly Tray in fornt of you.

2-1. Tray Disc(Fig.4-2)

1) Release Screw(S2).

Note

- Put the Base Assembly Tray face down(Bottom side).

2-2. Roller Base Tray

1) Unlock the two Locking Tabs(L2).

2-3. PCB Assembly Tray

1) Release two Screws(S3).
2) Unconnect the Connector(C3).

Note

- Put the Base Assembly Tray on original position(Top Side).

2-4. Motor Assembly Tray

1) Release 2 Screws(S4).

2-5. Gear Tray

2-6. Gear Wheel Tray

2-7. Base Tray

DECK MECHANISM DISASSEMBLY

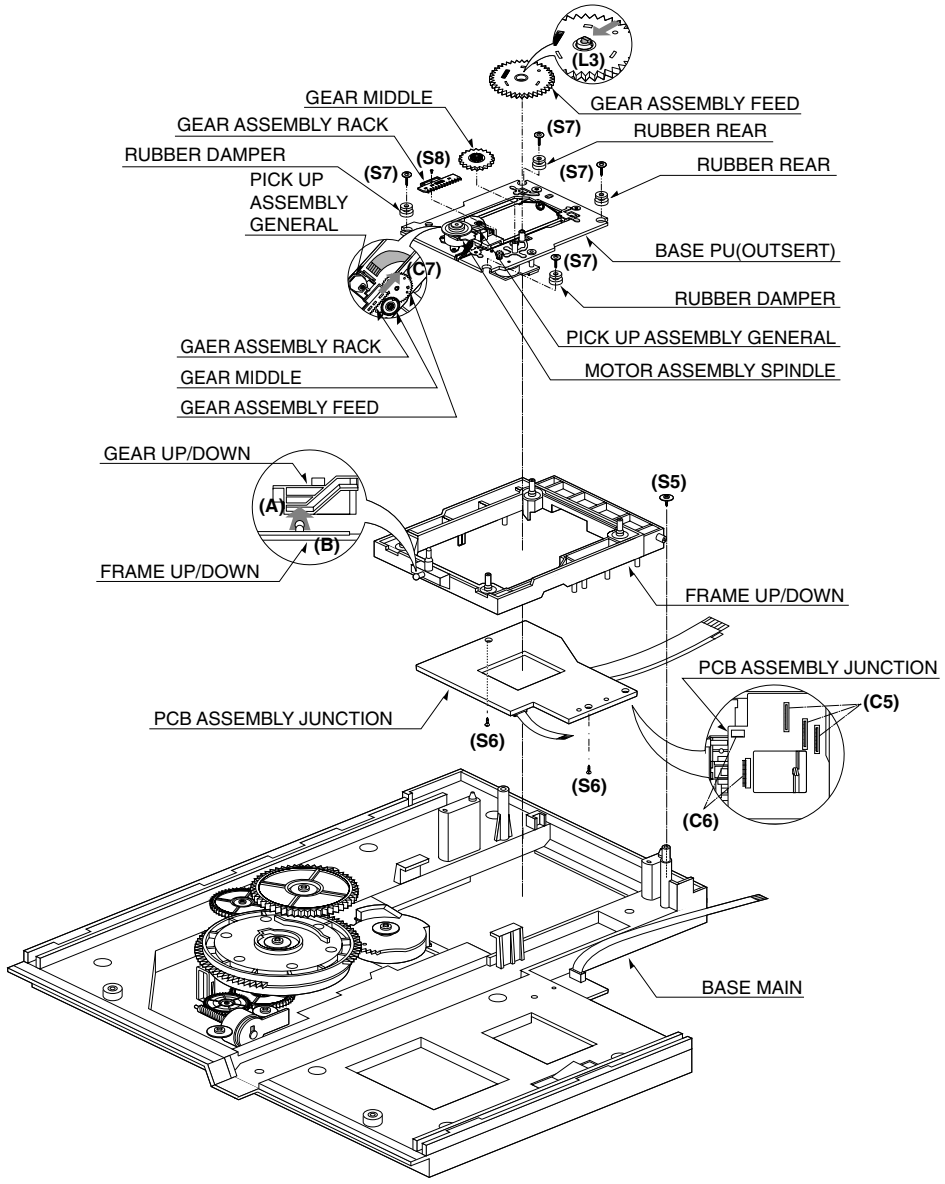


Fig. 4-3

3. Frame Assembly Up/Down(Fig. 4-3)

1) Release Screw(S5).

3-1. PCB Assembly Junction

1) Unconnect the 5 Connectors(C5), (C6).
2) Release 2 Screws(S6).

3-2. Base Assembly Sled Damper

Note

• Put the Base Assembly Main on original position(Top side)

1) Release 4 Screws(S7).
2) Disconnect the Connector(C7).

3-2-1. Gear Assembly Feed

1) Look the Locking Tab(L3) in direction of arrow.

3-2-2. Gear Assembly Middle

3-2-3. Gear Assembly Rack

1) Release the Screw(S8).

3-3. Rubber Damper

3-4. Frame Up/Down

DECK MECHANISM DISASSEMBLY

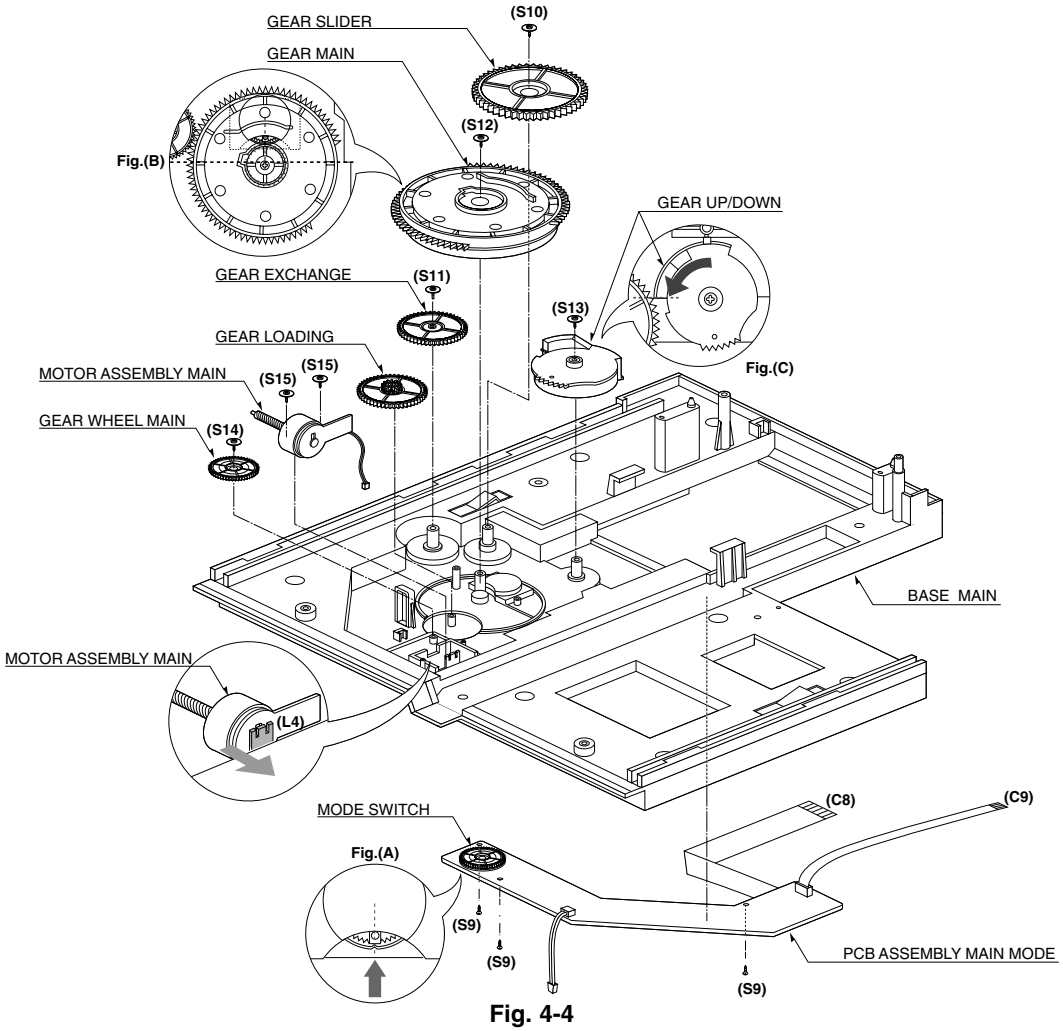


Fig. 4-4

4. Base Assembly Main(Fig. 4-4)

Note

- Put the Base Assembly Main face down(Bottom Side).

4-1. PCB Assembly Main Mode

1) Unconnect the Connectors (C8), (C9).
2) Release three Screws(S9).

Note

- When reassembling, align the Mode Switch position as Fig.(A).
- Put the Base Assembly Main on original position(Top Side)

4-2. Gear Slider

1) Release Screw(S10).

4-3. Gear Exchange

1) Release Screw(S11).

4-4. Gear Main

1) Release Screw(S12).

Note

- When reassembling, align the (A) position of the Gear Main to the (B) position of Mode Switch as Fig.(B)

4-5. Gear Up/Down

1) Release Screw(S13).

Note

- Reassembling, turn the Gear Up/Down in direction of arrow as Fig.(C).

4-6. Gear Wheel Main

1) Release Screw(S14).

4-7. Gear Loading

4-8. Motor Assembly Main

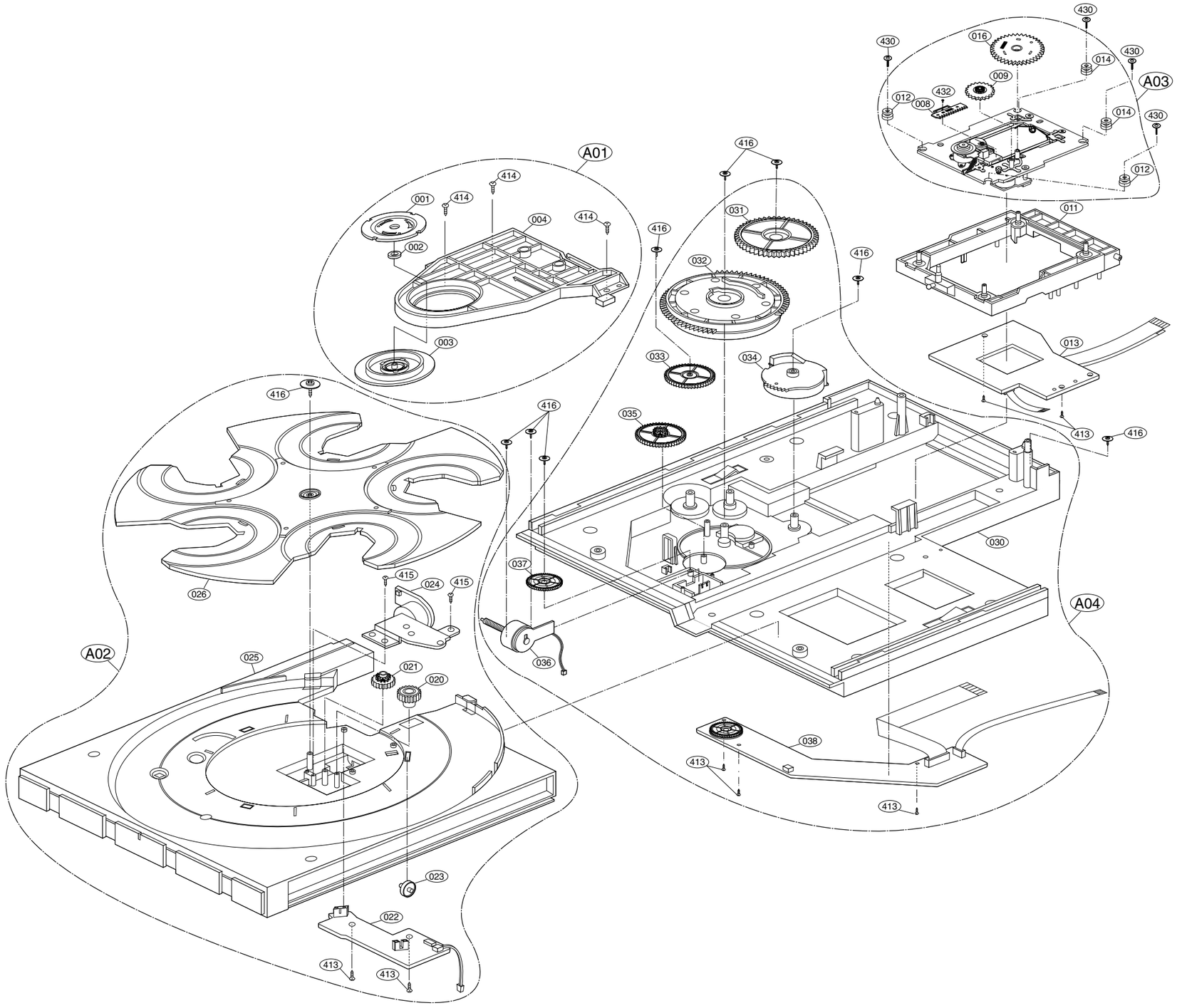
1) Release 2 Screws(S15).
2) Unlock the Locking Tab(L4).

4-9. Base Main

MEMO

EXPLODED VIEWS

1. Deck Mechanism Exploded View



MEMO

MEMO

SECTION 5 REPLACEMENT PARTS LIST

Location No.	Part No.	LG PART No.	Description	
011	79097012	3210R-0041A	FRAME	UP/DOWN
012	79097013	5040R-0047D	RUBBER	DAMPER(HARDNESS=30),DARKGREEN CHUNPOONG
013	79098810	6871R-0001K	PWB(PCB) ASSEMBLY,TO	DPM1 JUNCTION DVD-CD
014	79097014	5040R-0047A	RUBBER	REAR(E2,5040H-1054A),YAMAUCHI
014	79097015	5040R-0047B	RUBBER	DAMPER(E2,5040H-1054A),CHUNPOONG
016	79097016	4470R-0050A	GEAR	ASSY FEED
020	79097017	4470R-0073A	GEAR	WHEEL TRAY
021	79097018	4470R-0074A	GEAR	TRAY
023	79097019	4580R-0006A	ROLLER	BASE TRAY
026	79097021	3390R-0008A	TRAY	DISC (DPM1)
283	79098786	3581R-T045A	DOOR ASSEMBLY	TRAY (DMB5022N . AA1CTT)BK, SD-2805U/C
283	79098818	3581R-T045B	DOOR ASSEMBLY	TRAY (DMB5024N . AA1UTT)SILVE, SD-3805N
283	79098819	3581R-T045C	DOOR ASSEMBLY	TRAY (DMB5022N . AA1UTTK)BK, SD-K615U
⚠ 300	79098801	6410RAHS02A	POWER CORD	AP-10W IN SP2 CORE 80 STP SANG
030	79097022	3040R-0031A	BASE	MAIN (DPM1)
031	79097023	4470R-0069A	GEAR	SLIDER
032	79097024	4470R-0067A	GEAR	MAIN
033	79097025	4470R-0070A	GEAR	EXCHANGE
034	79097026	4470R-0068A	GEAR	UP/DOWN
035	79097027	4470R-0071A	GEAR	LOADING
037	79097029	4470R-0072A	GEAR	WHEEL MAIN
413	79097909	4000R-0006A	SCREW,DRAWING	TAPTITE 3*8(353-025B)
430	79097901	1SZZH-1003A	SCREW,DRAWING	+ D2.0 6MM SWRCH16A/NIY 4.5MM 1.5MM MACHINE PAN PL
432	79097902	1SZZR-0011A	SCREW,DRAWING	MACHINE
452	79097905	353-051A	SCREW,DRAWING	SPECIAL
455	79097907	353-051E	SCREW,DRAWING	SPECIAL (3X12)
462	79097908	353-085E	SCREW,DRAWING	+ 3 D4.0 L10.0 MSWR3/FZMCW-2
465	79097903	353-046K	SCREW,DRAWING	SPECIAL (3X10 B.K)
467	79097904	353-046N	SCREW,DRAWING	SPECIAL(3X8 BK.)
008	79097010	4470R-0047A	GEAR	ASSY RACK
801	79098787	3835RS0033E	INSTRUCTION ASSEMBLY	DMB5022N HA1UTT, SD-2805U/C
801	79098821	3835RS0033F	INSTRUCTION ASSEMBLY	DMB5022N HA1UTTK, SD-K615U
801	79098822	3835RS0033G	INSTRUCTION ASSEMBLY	DMB5024N HA1UTT, SD-3805N
009	79097011	4470R-0053A	GEAR	MIDDLE
900	79098807	6711R1N078A	REMOTE CONTROLLER AS	N6 DMB5022N AA1UTT, SD-K615U/2805U/C
900	79098823	6711R1N078B	REMOTE CONTROLLER AS	N6 DMB5024N AA1UTT, SD-3805N
A00	79098809	6721RH0326A	DECK ASSEMBLY,VIDEO	DPM-2 (DVD-CD R/RW M
A01	79098788	4931R-0037B	HOLDER ASSEMBLY	CLAMP -SH
A02	79098782	3041R-0014C	BASE ASSEMBLY	TRAY (DPM1)-SH
A03	79098784	3041R-0061B	BASE ASSEMBLY	SLED-DAMPER(DVD-CD R
A04	79098783	3041R-0016B	BASE ASSEMBLY	MAIN -SH
A43	79098785	3501RF3002A	BOARD ASSEMBLY	FRONT(DMB5022N _TOSHIBA)BK, SD-2805U/C
A43	79098824	3501RF3002B	BOARD ASSEMBLY	FRONT(DMB5024N_TOSHIBA)SIL, SD-3805N
A43	79098825	3501RF3002C	BOARD ASSEMBLY	FRONT(DMB5022N _AA1UTTK)BK, SD-K615U
A46	79098815	6871R-5030C	SUB PWB(PCB) ASSEMBL	DMB5024N EVNT 5CHNGER MAIN PLU, SD-3805N
A46	79098826	6871R-5030D	SUB PWB(PCB) ASSEMBL	DMB5022N EVNT 5CHNGER MAIN LE, SD-K615U,2805U/C
A47	79098812	6871R-5062B	PWB(PCB) ASSEMBLY,TO	DMB5022N SH JACK
A48	79098811	6871R-5061A	PWB(PCB) ASSEMBLY,TO	DMP5024N SH POWER(11
A250	79097301	3110R-0194D	CASE	TOP(5-ANAM-W/O DVD Q280G)SD-K615U/2805U/C
A250	79098829	3110R-0194M	CASE	TOP(5-CD , W/O DVD .J597G), SD-3805N
BC101	79091008	636-004C	CORE (CIRC),BEAD	BEAD CORE BFS3550R2FD8,R T/P
BD101	79096005	0DD160000DA	DIODE,RECTIFIERS	S1WBA60 BK SHINDENGEN - 600V - - - -
⚠ C101	79098792	624-088N	CAPACITOR,DRAWING	MPX104K 275VAC BULK
C103	79092004	0CE157CR610	CAPACITOR,FIXED ELECTROLYTIC	150UF SHL,SD 250V 20% FL BULK
C104	79092035	624-085D	CAPACITOR,FIXED ELECTROLYTIC	CE 47UF/50V KME (SMPS)
C109	79092003	0CE108BF630	CAPACITOR,FIXED ELECTROLYTIC	1000UF KME TYPE 16V 20% FM5 BULK
C110	79098729	0CN4730K948	CAPACITOR,FIXED TUBULAR(High	0.047UF D 50V 80%,-20% F(Y5V) TA26
C112	79092007	0CE3376D638	CAPACITOR,FIXED ELECTROLYTIC	330UF SMS,SG 10V 20% FM5 TP 5
C113	79092012	0CG3320U630	CAPACITOR,FIXED	3300PF D 400V 20% E(Z5U) R
C115	79092001	0CE1064K638	CAPACITOR,FIXED ELECTROLYTIC	10UF SRA,SS 50V 20% FM5 TP 5
C116	79092010	0CE477BH630	CAPACITOR,FIXED ELECTROLYTIC	470UF KME TYPE 25V 20% FM5 BULK
C117	79098729	0CN4730K948	CAPACITOR,FIXED TUBULAR(High	0.047UF D 50V 80%,-20% F(Y5V) TA26
C118	79098705	0CE1074F638	CAPACITOR,FIXED ELECTROLYTIC	100UF SRA,SS 16V 20% FM5 TP 5
C119	79092036	624-087B	CAPACITOR,FIXED CERAMIC(High	HIGH-VOL 100P/1KV SMPS SAMHWA
C120	79098705	0CE1074F638	CAPACITOR,FIXED ELECTROLYTIC	100UF SRA,SS 16V 20% FM5 TP 5
C121	79092005	0CE2276F638	CAPACITOR,FIXED ELECTROLYTIC	220UF SMS,SG 16V 20% FM5 TP 5
C122	79092035	624-085D	CAPACITOR,FIXED ELECTROLYTIC	CE 47UF/50V KME (SMPS)
C123	79092003	0CE108BF630	CAPACITOR,FIXED ELECTROLYTIC	1000UF KME TYPE 16V 20% FM5 BULK
C124	79098711	0CE337CH618	CAPACITOR,FIXED ELEC	330UF SHL,SD 25V 20%
C126	79092033	0CQ1031Y519	CAPACITOR,FIXED FILM	0.01UF D 630V 10% PE NI TP5
C128	79098731	0CQ1042K409	CAPACITOR,FIXED FILM	0.1UF S 50V 5% PE TP5
C129	79098705	0CE1074F638	CAPACITOR,FIXED ELECTROLYTIC	100UF SRA,SS 16V 20% FM5 TP 5
C130	79098709	0CE2274C638	CAPACITOR,FIXED ELECTROLYTIC	220UF SRA,SS 6.3V 20% FM5 TP 5
C131	79098705	0CE1074F638	CAPACITOR,FIXED ELECTROLYTIC	100UF SRA,SS 16V 20% FM5 TP 5
C137	79092007	0CE3376D638	CAPACITOR,FIXED ELECTROLYTIC	330UF SMS,SG 10V 20% FM5 TP 5
C138	79098702	0CE1054K638	CAPACITOR,FIXED ELECTROLYTIC	1UF SRA,SS 50V 20% FM5 TP 5
C201	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C207	79098715	0CH1105D942	CAPACITOR,FIXED	1UF 10V 80%,-20% Y5V(F) 1608 R/TP
C208	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C211	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C214	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C220	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C224	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C225	79098715	0CH1105D942	CAPACITOR,FIXED	1UF 10V 80%,-20% Y5V(F) 1608 R/TP
C229	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C232	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C238	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C240	79092016	0CH1222K562	CAPACITOR,FIXED	2200PF 50V 10% X7R(X) 1608 R/TP
C242	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP

Location No.	Part No.	LG PART No.	Description	
C245	79098715	0CH1105D942	CAPACITOR,FIXED	1UF 10V 80%,-20% Y5V(F) 1608 R/TP
C252	79092023	0CH4100K112	CAPACITOR,FIXED CERAMIC(High	10PF 50V 0.5 pF NP0 1608 R/TP
C253	79098715	0CH1105D942	CAPACITOR,FIXED	1UF 10V 80%,-20% Y5V(F) 1608 R/TP
C255	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C258	79098715	0CH1105D942	CAPACITOR,FIXED	1UF 10V 80%,-20% Y5V(F) 1608 R/TP
C261	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C272	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C273	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C274	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C278	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C284	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C285	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C286	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C287	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C290	79092024	0CH4220K412	CAPACITOR,FIXED CERAMIC(High	22PF 50V 5% NP0 1608 R/TP
C292	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C297	79098726	0CH8477C611	CAPACITOR,CHIP[AL.	470UF 6.3V 20% 85STD (CYL) R/TP
C2A0	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C2A3	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2A4	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C2A5	79098719	0CH1683F942	CAPACITOR,FIXED	0.068UF 16V 80%,-20% Y5V(F) 1608 R/TP
C2A6	79098714	0CH1102K562	CAPACITOR,FIXED	1000PF 50V 10% X7R(X) 1608 R/TP
C2A7	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2A8	79098716	0CH1152K562	CAPACITOR,FIXED	1500PF 50V 10% X7R(X) 1608 R/TP
C2A9	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2B3	79078718	0CH1392K562	CAPACITOR,FIXED	3900PF 50V 10% X7R(X) 1608 R/TP
C2B4	79098719	0CH1683F942	CAPACITOR,FIXED	0.068UF 16V 80%,-20% Y5V(F) 1608 R/TP
C2B5	79092019	0CH1333K562	CAPACITOR,FIXED	0.033UF 50V 10% X7R(X) 1608 R/TP
C2B9	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2C1	79092013	0CH1103K562	CAPACITOR,FIXED	0.01UF 50V 10% X7R(X) 1608 R/TP
C2C2	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C2C4	79098714	0CH1102K562	CAPACITOR,FIXED	1000PF 50V 10% X7R(X) 1608 R/TP
C2C5	79098717	0CH1332K562	CAPACITOR,FIXED	3300PF 50V 10% X7R(X) 1608 R/TP
C2C6	79098714	0CH1102K562	CAPACITOR,FIXED	1000PF 50V 10% X7R(X) 1608 R/TP
C2C8	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2C9	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C2D0	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C2D2	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2D4	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C2D5	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C2D6	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2D7	79098716	0CH1152K562	CAPACITOR,FIXED	1500PF 50V 10% X7R(X) 1608 R/TP
C2D9	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2M2	79092022	0CH1682K562	CAPACITOR,FIXED	6800PF 50V 10% X7R(X) 1608 R/TP
C2M3	79092020	0CH1472K562	CAPACITOR,FIXED	4700PF 50V 10% X7R(X) 1608 R/TP
C2M4	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2M6	79092030	0CH8107F611	CAPACITOR,CHIP[AL.	100UF 16V 20% 85STD (CYL) R/TP
C2M7	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C2M9	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2N6	79092017	0CH1223K942	CAPACITOR,FIXED	0.022UF 50V 80%,-20% Y5V(F) 1608 R/TP
C2N7	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C301	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C302	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C303	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C308	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C309	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C310	79092013	0CH1103K562	CAPACITOR,FIXED	0.01UF 50V 10% X7R(X) 1608 R/TP
C311	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C314	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C317	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C318	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C3F1	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C3F2	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C3F3	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C406	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C408	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C409	79098725	0CH8227D611	CAPACITOR,CHIP[AL.	220UF 10V 20% 85STD (CYL) R/TP
C410	79098722	0CH4271K412	CAPACITOR,FIXED CERAMIC(High	270PF 50V 5% NP0 1608 R/TP
C411	79098714	0CH1102K562	CAPACITOR,FIXED	1000PF 50V 10% X7R(X) 1608 R/TP
C412	79098722	0CH4271K412	CAPACITOR,FIXED CERAMIC(High	270PF 50V 5% NP0 1608 R/TP
C413	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C414	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C415	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C416	79098714	0CH1102K562	CAPACITOR,FIXED	1000PF 50V 10% X7R(X) 1608 R/TP
C417	79098722	0CH4271K412	CAPACITOR,FIXED CERAMIC(High	270PF 50V 5% NP0 1608 R/TP
C418	79098718	0CH1392K562	CAPACITOR,FIXED	3900PF 50V 10% X7R(X) 1608 R/TP
C419	79092030	0CH8107F611	CAPACITOR,CHIP[AL.	100UF 16V 20% 85STD (CYL) R/TP
C420	79098718	0CH1392K562	CAPACITOR,FIXED	3900PF 50V 10% X7R(X) 1608 R/TP
C421	79092030	0CH8107F611	CAPACITOR,CHIP[AL.	100UF 16V 20% 85STD (CYL) R/TP
C422	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C423	79098722	0CH4271K412	CAPACITOR,FIXED CERAMIC(High	270PF 50V 5% NP0 1608 R/TP
C424	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C501	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C503	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C504	79098723	0CH8106F611	CAPACITOR,FIXED ELECTROLYTIC	10UF 16V 20% 85STD (CYL) R/TP
C506	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C507	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C508	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C523	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C525	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C538	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C540	79098720	0CH4180K412	CAPACITOR,FIXED CERAMIC(High	18PF 50V 5% NP0 1608 R/TP

Location No.	Part No.	LG PART No.	Description	
C541	79098721	0CH4270K412	CAPACITOR,FIXED CERAMIC(High	27PF 50V 5% NP0 1608 R/TP
C542	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C543	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C544	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C546	79092025	0CH4221K412	CAPACITOR,FIXED CERAMIC(High	220PF 50V 5% NP0 1608 R/TP
C550	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C553	79092025	0CH4221K412	CAPACITOR,FIXED CERAMIC(High	220PF 50V 5% NP0 1608 R/TP
C554	79092014	0CH1104K942	CAPACITOR,FIXED	0.1UF 50V 80%,-20% Y5V(F) 1608 R/TP
C555	79097121	0CH4101K412	CAPACITOR,FIXED CERAMIC(High	100PF 50V 5% NP0 1608 R/TP
C557	79098721	0CH4270K412	CAPACITOR,FIXED CERAMIC(High	27PF 50V 5% NP0 1608 R/TP
C558	79097376	0CH8105K611	CAPACITOR,CHIP[AL.	1UF 50V 20% 85STD (CYL) R/TP
C559	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C560	79092030	0CH8107F611	CAPACITOR,CHIP[AL.	100UF 16V 20% 85STD (CYL) R/TP
C561	79098724	0CH8226C611	CAPACITOR,CHIP[AL.	22UF 6.3V 20% 85STD (CYL) R/TP
C562	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C563	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C570	79092031	0CH8476C611	CAPACITOR,CHIP[AL.	47UF 6.3V 20% 85STD (CYL) R/TP
C571	79092018	0CH1225F944	CAPACITOR,FIXED	2.2UF 16V 80%,-20% Y5V(F) 3216 R/TP
C606	79098728	0CN1040K948	CAPACITOR,FIXED TUBULAR(High	0.1UF D 50V 80%,-20% F(Y5V) TA26
C613	79098706	0CE1086C638	CAPACITOR,FIXED ELECTROLYTIC	1000000000PF SMS,SG 6.3V 20% FM5 TP 5
C614	79098713	0CE477CC618	CAPACITOR,FIXED ELEC	470UF SHL,SD 6.3V 20
C901	79098728	0CN1040K948	CAPACITOR,FIXED TUBULAR(High	0.1UF D 50V 80%,-20% F(Y5V) TA26
C905	79098730	0CN6810K518	CAPACITOR,FIXED TUBULAR(High	680PF D 50V 10% B(Y5P) TA26
C907	79098712	0CE4763C638	CAPACITOR,FIXED ELECTROLYTIC	47UF SRE,SE 6.3V 20% FM5 TP 5
C909	79098728	0CN1040K948	CAPACITOR,FIXED TUBULAR(High	0.1UF D 50V 80%,-20% F(Y5V) TA26
C912	79098712	0CE4763C638	CAPACITOR,FIXED ELECTROLYTIC	47UF SRE,SE 6.3V 20% FM5 TP 5
C918	79098727	0CN1030F678	CAPACITOR,FIXED TUBULAR(High	0.01UF D 16V 20% X5R TA26
C920	79098703	0CE1063F638	CAPACITOR,FIXED ELECTROLYTIC	10UF SRE,SE 16V 20% FM5 TP 5
C921	79098712	0CE4763C638	CAPACITOR,FIXED ELECTROLYTIC	47UF SRE,SE 6.3V 20% FM5 TP 5
D100	79096002	0DD010009CA	DIODE,RECTIFIERS	EG01C TP SANKEN - - - - - -
D100	79096006	0DD221009AA	DIODE,RECTIFIERS	ERA22-10 KFLB,TP ,R T/P,FUJI
D102	79096009	0DR158220AA	DIODE,RECTIFIERS	1N5822 BK RECTRON DO201AD 40V 3A 80A - -
D102	79096011	0DR810040BA	DIODE,RECTIFIERS	ERC81-004L22 BK FUJI DO201AD 40V 2.6A 120A 0SEC 5M
D103	79096010	0DR310000AA	DIODE,RECTIFIERS	RU3YXLF-C1 BK SANKEN - 100V 2A 20A - 0.2UA
D104	79096001	0DD010009AC	DIODE,RECTIFIERS	EU01W(R-FORM) TP SANKEN
D106	79096008	0DR104009AB	DIODE,RECTIFIERS	RL104 R. TP GULF SEMICONDUCTOR LTD. - 400V 1A 30A
D107	79096001	0DD010009AC	DIODE,RECTIFIERS	EU01W(R-FORM) TP SANKEN
D111	79096012	0DRRE00029A	DIODE,RECTIFIERS	1N17 RECTRON TP NON
D2A1	79096013	0DS202009CA	DIODE,SWITCHING	DAN202K TP ROHM KOREA SOT23 80V - - 4NSEC 0.1UA
D603	79098733	0DS141489BB	DIODE,SWITCHING	1N4148 26MM TP GRANDE DO34 75V - - 4NSEC 5UA
DIG901	79098793	6302R-V103C	DIGITRON	7-BT-279GNK FUTABA S
⚠ F101	79098701	585-027B	FUSE,SLOW BLOW	1600MA 250 V 5.2X20 CY/GL KS / JAPAN / UL / CSA 51
⚠ F102	79094018	0IRH100000B	IC,ROHM	ICP-N10 T104 TP IC DETACT
⚠ F102	79098817	GIRH100000B	IC,ROHM	ICP-N10 T104 TP IC D
⚠ F602	79091006	6200HJC901A	FILTER(CIRC),EMI	CFI06B1H101MF SAMWHA TP 2.5K/TP
FH101	79098790	586-008B	HOLDER	FUSE CLIP TP SINSUNG
⚠ IC101	79098751	0IPMGFA024A	IC,POWER MANAGEMENT	KA5M0265R-YDTU FAIRC
⚠ IC102	79094029	657-062B	SENSOR	PC123Y PHOTO-COUPLER(SARPH)
⚠ IC102	79094030	657-063A	SENSOR	LTV-817B,PHOTO COUPLER(LITEON)
IC103	79098740	0IKE781200S	IC,KEC	KIA78R12PI CU 4P TO-
IC103	79098750	0IPMGFA017A	IC,POWER MANAGEMENT	KA78R12TSTU FAIRCHIL
IC104	79094010	0IKE431000A	IC,KEC	KIA431 - - - -
IC105	79098749	0IPMGFA016A	IC,POWER MANAGEMENT	KA78R08TSTU FAIRCHIL
IC105	79098753	0IPMGKE008B	IC,POWER MANAGEMENT	KIA78R08PI CU KEC 4P
IC106	79098748	0IPMGFA015A	IC,POWER MANAGEMENT	KA78R33TSTU FAIRCHIL
IC106	79098752	0IPMGKE006B	IC,POWER MANAGEMENT	KIA78R33PI CU KEC 4P
IC107	79098748	0IPMGFA015A	IC,POWER MANAGEMENT	KA78R33TSTU FAIRCHIL
IC107	79098752	0IPMGKE006B	IC,POWER MANAGEMENT	KIA78R33PI CU KEC 4P
IC201	79098742	0ILNRHY002B	IC,LINEAR	HDC25D811B HYUNDAI 2
IC203	79098736	0IEB121616A	IC,ELITE MEMORY TECHNOLOGY	M12L16161A-7T 50P TSOP ST 16M(512KX16BITX2BANK) SD
IC206	79094027	GITO704000F	IC,TOSHIBA	TC7W04FU
IC2A1	79098741	0ILNRHI003A	IC,LINEAR	HD153702TF HITACHI 6
IC2A2	79094009	0IJR341400C	IC,JRC	NJM3414AM-TE1,3K/REEL. JRC - - - -
IC2A4	79098738	0IKE393000G	IC,KEC	KIA393F-EL FLP-8 TP DUAL COMPARATOR =(NJM2903M)
IC2M1	79094002	0IFA303100A	IC,FAIRCHILD	KA3031 48P QFP BK 6CH MOTOR DRIVER
IC301	79098757	0IXL957210C	IC,XILINX	XC9572XL-10TQ100C 10
IC305	79094008	0IHY576532A	IC,HYUNDAI	HY57V653220CTC-7 86P
IC305	79098745	0IMMREB005A	IC,MEMORIES	M12L64322A-7T ELITE
IC305	79094031	0IMMRHY025A	IC,MEMORIES	HY57643220CT-7I HYUN
IC305	79098746	0IMMRWI004A	IC,MEMORIES	W986432AH-7 WINBOND
IC3F1A	79098816	6957R-3161B	PROGRAM	DMB5024N AA1UTT TOSH
IC401	79098755	0IPRPCI003B	IC,PERIPHERALS	CS4391-KZR CIRRUS LO
IC402	79098737	0IJR458000B	IC,JRC	NJM4580M 8,DMP8 TP OP AMP 2K/REEL
IC501	79098747	0INS860200A	IC,NATIONAL SEMICOND	NDV8602 240 VQFP BK
IC502	79098744	0IMMRAL012A	IC,MEMORIES	AT93C56-10SC-2.7-8S1
IC503	79094003	0IFA742440F	IC,FAIRCHILD	MM74HCT244SJ 20P SOI
IC504	79098756	0IPRPMT002A	IC,PERIPHERALS	MM1510XNRE MITSUMI 6
IC506	79098754	0IPMGRH003A	IC,POWER MANAGEMENT	BA18BC0FP-E2 ROHM 3P TO252-3 R
IC901	79098743	0IMCRHY031B	IC,MICRO CONTROLLER	GMS81C2012-HI013 HYU
IC902	79098739	0IKE704200B	IC,KEC	KIA7042P(AT) TO-92 4.2V RESET - - - -
JK601	79098798	6612K00001A	JACK,FIBER OPTIC	PLT130/T2 EVERLIGHT
JK601	79098799	6612R-L007A	JACK,FIBER OPTIC	GP1FA550TZ SHARP VE
JK602	79098905	6612R-C006G	JACK,RCA	RCA DIN-11G YUQIU D.GND R9P+DIN NT MI
⚠ L101	79091004	616-145J	FILTER(CIRC)	BUJEON V-04350
⚠ L101	79098791	616-145M	FILTER(CIRC)	V-04350 LS FUTAI BULK =616-145H
L102	79098794	633-088D	COIL,CHOKE	CHOCK ,20UH,LEAD CUT
L103	79091007	633-088G	COIL,CHOKE	CHOCK(22MH) TP 5MM
L201	79091005	6200HJC102A	FILTER(CIRC),EMI	HB-1M2012-102JT CERATECH TP 3K/REEL
L603	79091001	0LA0101K018	INDUCTOR,AXIAL LEAD	1UH 10% TP 2.3 X 3.4 TA26 -
L901	79098758	0LR1000K035	INDUCTOR,RADIAL LEAD	100UH 10% TP 6 X 6 TR5 -
LED901	79098732	0DL325319AA	LED	SPR325MVWT31 TP ROHM GREEN/RED .
PBK00	79098814	6871R-5066A	PWB(PCB) ASSEMBLY,TO	DMB5022N SH KEY

Location No.	Part No.	LG PART No.	Description	
PBT00	79098813	6871R-5065A	PWB(PCB) ASSEMBLY,TO	DMB5022N SH TIMER, SD-3805N/2805U/C
PBT00	79098827	6871R-5065B	PWB(PCB) ASSEMBLY,TO	DMB5022N W/O NAVIGATION K, SD-K615U
Q107	79095003	0TR127309AA	TRANSISTOR,BIPOLARS	KTA1273 TP KEC TO92 -Y(KTA966A) L PNP
Q108	79095006	0TR319809AC	TRANSISTOR,BIPOLARS	KTC3198 TP KEC - - -BL (KTC1815)
Q108	79095007	0TR319909AF	TRANSISTOR,BIPOLARS	KTC3199-BL MINI TP KEC - -
Q2A1	79095002	0TR103709BB	TRANSISTOR,BIPOLARS	2SA1037K-Q CHIP TP ROHM - -
Q2A5	79098781	0TR388209AA	TRANSISTOR,BIPOLARS	CHIP KTC3882 SOT-23
Q2M1	79098777	0TR124009AP	TRANSISTOR,BIPOLARS	DTC124EK TP ROHM KOREA SOT23 3K/R
Q605	79098776	0TR103009AF	TRANSISTOR,BIPOLARS	KRA103M-TP (KRA2203) KEC
Q607	79095006	0TR319809AC	TRANSISTOR,BIPOLARS	KTC3198 TP KEC - - -BL (KTC1815)
Q607	79095007	0TR319909AF	TRANSISTOR,BIPOLARS	KTC3199-BL MINI TP KEC - -
Q608	79095006	0TR319809AC	TRANSISTOR,BIPOLARS	KTC3198 TP KEC - - -BL (KTC1815)
Q608	79095007	0TR319909AF	TRANSISTOR,BIPOLARS	KTC3199-BL MINI TP KEC - -
Q615	79098778	0TR126609AE	TRANSISTOR,BIPOLARS	KTA TP KEC - 1266-GR, (KTA1015)
Q615	79098779	0TR126709AC	TRANSISTOR,BIPOLARS	KTA1267-GR MINI TP KEC - -
Q615	79098780	0TR198009CA	TRANSISTOR,BIPOLARS	2SA1980G TP AUK TO92 -
Q901	79098775	0TR103009AE	TRANSISTOR,BIPOLARS	KRC103M TP KEC - - (KRC1203)
R101	79093056	614-007A	RESISTOR,FIXED CEMENT	2.7/2W CEMENT SMPS V
R102	79093012	0RD2203F608	RESISTOR,FIXED CARBON FILM	220K OHM 1/6 W 5.00% TA26
R103	79093055	0RS5602K619	RESISTOR,FIXED METAL OXIDE	56K OHM 2 W 5.00% TR
R104	79093012	0RD2203F608	RESISTOR,FIXED CARBON FILM	220K OHM 1/6 W 5.00% TA26
R112	79093002	0RD0391F608	RESISTOR,FIXED CARBON FILM	3.9 OHM 1/6 W 5.00% TA26
R114	79093006	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K OHM 1/6 W 5.00% TA26
R120	79093018	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K OHM 1/6 W 5.00% TA26
R121	79093007	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K OHM 1/6 W 5.00% TA26
R122	79093011	0RD2200F608	RESISTOR,FIXED CARBON FILM	220 OHM 1/6 W 5.00% TA26
R123	79093005	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K OHM 1/6 W 5.00% TA26
R124	79093010	0RD1800F608	RESISTOR,FIXED CARBON FILM	180 OHM 1/6 W 5.00% TA26
R125	79093015	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K OHM 1/6 W 5.00% TA26
R126	79093004	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5.00% TA26
R127	79093054	0RN3601E408	RESISTOR,FIXED METAL FILM	3.6K OHM 1/8 W 1.00% TA26
R128	79093053	0RN3301E408	RESISTOR,FIXED METAL FILM	3.3K OHM 1/8 W 1.00% TA26
R130	79093005	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K OHM 1/6 W 5.00% TA26
R145	79093016	0RD4700F608	RESISTOR,FIXED CARBON FILM	470 OHM 1/6 W 5.00% TA26
R201	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R203	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R207	79093030	0RH1004C622	RESISTOR,METAL GLAZED(CHIP)	1M OHM 1 / 16 W 1608 5.00% D
R217	79093021	0RH0102C622	RESISTOR,METAL GLAZED(CHIP)	10 OHM 1 / 16 W 1608 5.00% D
R218	79093044	0RH4700C622	RESISTOR,METAL GLAZED(CHIP)	470 OHM 1 / 16 W 1608 5.00% D
R219	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R221	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R230	79093027	0RH1000C622	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D
R239	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R253	79093023	0RH0222C622	RESISTOR,METAL GLAZED(CHIP)	22 OHM 1 / 16 W 1608 5.00% D
R273	79093034	0RH1501C622	RESISTOR,METAL GLAZED(CHIP)	1.5K OHM 1 / 16 W 1608 5.00% D
R274	79093048	0RH6200C622	RESISTOR,METAL GLAZED(CHIP)	620 OHM 1 / 16 W 1608 5.00% D
R275	79093034	0RH1501C622	RESISTOR,METAL GLAZED(CHIP)	1.5K OHM 1 / 16 W 1608 5.00% D
R276	79093052	0RH9100C622	RESISTOR,METAL GLAZED(CHIP)	910 OHM 1 / 16 W 1608 5.00% D
R277	79093057	0RH1500C622	RESISTOR,METAL GLAZED(CHIP)	150 OHM 1 / 16 W 1608 5.00% D
R278	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R288	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R290	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R291	79093027	0RH1000C622	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D
R293	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R2A1	79093026	0RH0912C622	RESISTOR,METAL GLAZED(CHIP)	91 OHM 1 / 16 W 1608 5.00% D
R2A2	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R2A6	79098769	0RH1202C422	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 1.00% D
R2A9	79098774	0RH5602C622	RESISTOR,METAL GLAZED(CHIP)	56K OHM 1 / 16 W 1608 5.00% D
R2B0	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2B2	79093022	0RH0182C622	RESISTOR,METAL GLAZED(CHIP)	18 OHM 1 / 16 W 1608 5.00% D
R2B4	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R2B5	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2B6	79093022	0RH0182C622	RESISTOR,METAL GLAZED(CHIP)	18 OHM 1 / 16 W 1608 5.00% D
R2B8	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R2C0	79093047	0RH5601C622	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D
R2C4	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2C6	79093047	0RH5601C622	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D
R2D1	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R2D3	79093047	0RH5601C622	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D
R2D5	79093050	0RH6801C622	RESISTOR,METAL GLAZED(CHIP)	6.8K OHM 1 / 16 W 1608 5.00% D
R2D6	79093026	0RH0912C622	RESISTOR,METAL GLAZED(CHIP)	91 OHM 1 / 16 W 1608 5.00% D
R2E6	79093027	0RH1000C622	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D
R2E8	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R2F1	79098771	0RH2200C622	RESISTOR,METAL GLAZED(CHIP)	220 OHM 1 / 16 W 1608 5.00% D
R2F3	79093027	0RH1000C622	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D
R2F5	79098772	0RH2202C422	RESISTOR,METAL GLAZED(CHIP)	22K OHM 1 / 16 W 1608 1.00% D
R2F6	79093047	0RH5601C622	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D
R2F8	79093039	0RH2201C622	RESISTOR,METAL GLAZED(CHIP)	2.2K OHM 1 / 16 W 1608 5.00% D
R2G3	79093047	0RH5601C622	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D
R2G7	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R2G9	79093057	0RH1500C622	RESISTOR,METAL GLAZED(CHIP)	150 OHM 1 / 16 W 1608 5.00% D
R2M1	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2M2	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R2M3	79093051	0RH7501C622	RESISTOR,METAL GLAZED(CHIP)	7.5K OHM 1 / 16 W 1608 5.00% D
R2M5	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2M6	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R2M8	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2M9	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R2N0	79093032	0RH1202C622	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 5.00% D
R2N1	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2N2	79093047	0RH5601C622	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D
R2N3	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D

Location No.	Part No.	LG PART No.	Description	
R2N4	79093035	0RH1502C622	RESISTOR,METAL GLAZED(CHIP)	15K OHM 1 / 16 W 1608 5.00% D
R2N5	79093032	0RH1202C622	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 5.00% D
R2N7	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R2P2	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2P3	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R2P4	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R2P5	79093031	0RH1201C622	RESISTOR,METAL GLAZED(CHIP)	1.2K OHM 1 / 16 W 1608 5.00% D
R2P7	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R2Q2	79093032	0RH1202C622	RESISTOR,METAL GLAZED(CHIP)	12K OHM 1 / 16 W 1608 5.00% D
R2Q3	79093035	0RH1502C622	RESISTOR,METAL GLAZED(CHIP)	15K OHM 1 / 16 W 1608 5.00% D
R2Q7	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R2Q8	79093040	0RH2202C622	RESISTOR,METAL GLAZED(CHIP)	22K OHM 1 / 16 W 1608 5.00% D
R2R1	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R306	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R307	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R309	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R310	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R314	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R318	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R321	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R322	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R323	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R350	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R351	79093027	0RH1000C622	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D
R361	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R362	79093027	0RH1000C622	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D
R364	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R367	79093031	0RH1201C622	RESISTOR,METAL GLAZED(CHIP)	1.2K OHM 1 / 16 W 1608 5.00% D
R368	79098773	0RH4702C622	RESISTOR,METAL GLAZED(CHIP)	47K OHM 1 / 16 W 1608 5.00% D
R369	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R370	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R3A2	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R3F2	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R3F3	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R3F4	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R401	79093022	0RH0182C622	RESISTOR,METAL GLAZED(CHIP)	18 OHM 1 / 16 W 1608 5.00% D
R403	79093021	0RH0102C622	RESISTOR,METAL GLAZED(CHIP)	10 OHM 1 / 16 W 1608 5.00% D
R404	79093051	0RH7501C622	RESISTOR,METAL GLAZED(CHIP)	7.5K OHM 1 / 16 W 1608 5.00% D
R405	79098770	0RH1801C622	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D
R407	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R409	79093051	0RH7501C622	RESISTOR,METAL GLAZED(CHIP)	7.5K OHM 1 / 16 W 1608 5.00% D
R412	79098770	0RH1801C622	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D
R413	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R414	79093047	0RH5601C622	RESISTOR,METAL GLAZED(CHIP)	5.6K OHM 1 / 16 W 1608 5.00% D
R415	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R416	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R417	79098770	0RH1801C622	RESISTOR,METAL GLAZED(CHIP)	1.8K OHM 1 / 16 W 1608 5.00% D
R418	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R419	79093041	0RH3300C622	RESISTOR,METAL GLAZED(CHIP)	330 OHM 1 / 16 W 1608 5.00% D
R421	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R431	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R432	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R433	79093046	0RH5600C622	RESISTOR,METAL GLAZED(CHIP)	560 OHM 1 / 16 W 1608 5.00% D
R435	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R501	79093042	0RH3301C622	RESISTOR,METAL GLAZED(CHIP)	3.3K OHM 1 / 16 W 1608 5.00% D
R502	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R503	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R504	79093033	0RH1500C422	RESISTOR,METAL GLAZE	150 OHM 1 / 16 W 160
R505	79093021	0RH0102C622	RESISTOR,METAL GLAZED(CHIP)	10 OHM 1 / 16 W 1608 5.00% D
R506	79093028	0RH1001C422	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 1.00% D
R507	79098768	0RH1100C622	RESISTOR,METAL GLAZED(CHIP)	110 OHM 1 / 16 W 1608 5.00% D
R508	79093025	0RH0752C622	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D
R509	79098768	0RH1100C622	RESISTOR,METAL GLAZED(CHIP)	110 OHM 1 / 16 W 1608 5.00% D
R510	79093023	0RH0222C622	RESISTOR,METAL GLAZED(CHIP)	22 OHM 1 / 16 W 1608 5.00% D
R516	79093027	0RH1000C622	RESISTOR,METAL GLAZED(CHIP)	100 OHM 1 / 16 W 1608 5.00% D
R517	79093023	0RH0222C622	RESISTOR,METAL GLAZED(CHIP)	22 OHM 1 / 16 W 1608 5.00% D
R521	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R522	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R523	79093045	0RH4701C622	RESISTOR,METAL GLAZED(CHIP)	4.7K OHM 1 / 16 W 1608 5.00% D
R524	79098767	0RH1001C622	RESISTOR,METAL GLAZED(CHIP)	1K OHM 1 / 16 W 1608 5.00% D
R525	79091002	0LC0233002B	INDUCTOR,CHIP	HB-1S1608-800JT CERA
R530	79093031	0RH1201C622	RESISTOR,METAL GLAZED(CHIP)	1.2K OHM 1 / 16 W 1608 5.00% D
R534	79093049	0RH6800C622	RESISTOR,METAL GLAZED(CHIP)	680 OHM 1 / 16 W 1608 5.00% D
R535	79093031	0RH1201C622	RESISTOR,METAL GLAZED(CHIP)	1.2K OHM 1 / 16 W 1608 5.00% D
R541	79093029	0RH1002C622	RESISTOR,METAL GLAZED(CHIP)	10K OHM 1 / 16 W 1608 5.00% D
R588	79093025	0RH0752C622	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D
R597	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R599	79093025	0RH0752C622	RESISTOR,METAL GLAZED(CHIP)	75 OHM 1 / 16 W 1608 5.00% D
R5A1	79093020	0RH0000C622	RESISTOR,METAL GLAZED(CHIP)	0 OHM 1 / 16 W 1608 5.00% D
R604	79098759	0RD0752F608	RESISTOR,FIXED CARBON FILM	75 OHM 1/6 W 5.00% TA26
R605	79093004	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5.00% TA26
R618	79093006	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K OHM 1/6 W 5.00% TA26
R620	79093011	0RD2200F608	RESISTOR,FIXED CARBON FILM	220 OHM 1/6 W 5.00% TA26
R622	79093001	0RD0222F608	RESISTOR,FIXED CARBON FILM	22 OHM 1/6 W 5.00% TA26
R624	79093004	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5.00% TA26
R633	79093017	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K OHM 1/6 W 5.00% TA26
R634	79098763	0RD5601F608	RESISTOR,FIXED CARBON FILM	5.6K OHM 1/6 W 5.00% TA26
R6M1	79093011	0RD2200F608	RESISTOR,FIXED CARBON FILM	220 OHM 1/6 W 5.00% TA26
R6M2	79093006	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K OHM 1/6 W 5.00% TA26
R6M3	79093011	0RD2200F608	RESISTOR,FIXED CARBON FILM	220 OHM 1/6 W 5.00% TA26
R6M4	79093006	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K OHM 1/6 W 5.00% TA26
R901	79098764	0RD6800F608	RESISTOR,FIXED CARBON FILM	680 OHM 1/6 W 5.00% TA26

Location No.	Part No.	LG PART No.	Description	
R902	79098765	0RD8200F608	RESISTOR,FIXED CARBON FILM	820 OHM 1/6 W 5.00% TA26
R903	79093007	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K OHM 1/6 W 5.00% TA26
R904	79098760	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K OHM 1/6 W 5.00% TA26
R905	79098761	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K OHM 1/6 W 5.00% TA26
R906	79098762	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K OHM 1/6 W 5.00% TA26
R907	79093017	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K OHM 1/6 W 5.00% TA26
R908	79098766	0RD8201F608	RESISTOR,FIXED CARBON FILM	8.2K OHM 1/6 W 5.00% TA26
R909	79093008	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K OHM 1/6 W 5.00% TA26
R910	79093013	0RD2702F608	RESISTOR,FIXED CARBON FILM	27K OHM 1/6 W 5.00% TA26
R911	79093019	0RD6802F608	RESISTOR,FIXED CARBON FILM	68K OHM 1/6 W 5.00% TA26
R913	79098764	0RD6800F608	RESISTOR,FIXED CARBON FILM	680 OHM 1/6 W 5.00% TA26
R914	79098765	0RD8200F608	RESISTOR,FIXED CARBON FILM	820 OHM 1/6 W 5.00% TA26
R915	79093007	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K OHM 1/6 W 5.00% TA26
R916	79098760	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K OHM 1/6 W 5.00% TA26
R917	79098761	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K OHM 1/6 W 5.00% TA26
R918	79098762	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K OHM 1/6 W 5.00% TA26
R919	79093017	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K OHM 1/6 W 5.00% TA26
R920	79098766	0RD8201F608	RESISTOR,FIXED CARBON FILM	8.2K OHM 1/6 W 5.00% TA26
R921	79093008	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K OHM 1/6 W 5.00% TA26
R922	79093013	0RD2702F608	RESISTOR,FIXED CARBON FILM	27K OHM 1/6 W 5.00% TA26
R925	79093005	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K OHM 1/6 W 5.00% TA26
R933	79093014	0RD3300F608	RESISTOR,FIXED CARBON FILM	330 OHM 1/6 W 5.00% TA26
R938	79093004	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5.00% TA26
R939	79093011	0RD2200F608	RESISTOR,FIXED CARBON FILM	220 OHM 1/6 W 5.00% TA26
R944	79093005	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K OHM 1/6 W 5.00% TA26
R951	79093006	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K OHM 1/6 W 5.00% TA26
R990	79093007	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K OHM 1/6 W 5.00% TA26
R991	79093004	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5.00% TA26
R993	79093007	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K OHM 1/6 W 5.00% TA26
R996	79098762	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K OHM 1/6 W 5.00% TA26
RC901	79098808	6712R1638GA	REMOTE CONTROLLER RECEIVER	TSOP1838RF1 TEMIC 16MM 37.9KHZ
SW602	79098797	6600R-SH18A	SWITCH,TACT	CSS-4206 CHANG SHIN
SW901	79098789	556-282C	SWITCH,TACT	SKQNQED ALPS 5MM 12V/50MAV TACTA VERTICAL 160G
SW9A1	79098796	6600RRB003A	SWITCH,TACT	SKQUAA J-ALPS NON 12V 50MA VERTICAL 160G, SD-3805N/2805U/C
⚠ T101	79091009	642-024E	TRANSFORMER,SMPS	SJE-024E SOOJEONG WI
⚠ V101	79098795	656-004C	VARISTOR	SVC681D-10A SAMHWA 4.O CUT
X201	79098902	6202R-BM01A	CRYSTAL,SMD	HC-49/SM5H KONY CHIP 33.8688MHZ 50PPM 18PF TP
X501	79098901	6202R-BL01A	CRYSTAL,SMD	HC-49/SM5H KONY CHIP 27MHZ 20PPM 15PF TP
ZD101	79098735	0DZ560009CJ	DIODE,ZENERS	GDZJ5.6B 26MM GRANDE
ZD605	79098734	0DZ332609FB	DIODE,ZENERS	GDZJ3.3B 26MM GRANDE

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN